

## The Week

**HOME** 1-5  
Polystyrene hit to save women's  
conversion courses  
Chelsea votes chemistry switch  
BTCC strikes up for sub-degree  
courses  
RCA plunged into new crisis as  
rector resigns

**OVERSEAS** 6-7  
Austrolia clamps down on  
foreigners  
American academic salaries  
outpaced by inflation  
Pope awarded honorary degrees by  
two Polish universities  
Irish minister steps into medical  
inkline row

**ARTICLES** 8-12  
Michael Housley reports on foreign  
teachers in Japan; Patrick  
McQuill discusses the growing  
competition between American  
colleges and industry in train  
technologists; and Philip Wilson  
reports on Italy's scientific  
journalism, 8  
Richard Veekes reports on this  
week's World University Games  
in Edmonton and talks to Judy  
Livermore, one of Britain's  
brightest hopes, 9  
Stephen Chnu discusses the danger  
of a university-based neo-  
colonialism; and Ali Mazrui  
looks at Africa's place in a new  
world technological order, 10-11  
Peter Knight describes the most  
recent changes in the polytechnic  
and college "poul", 12

**BOOKS** 13-18  
John Gooch reviews *Finest Hour*:  
Winston S. Churchill 1939-1941  
by Martin Gilbert, 13  
Peter Willmott reviews a new study  
of cohabitation (14), P. J.  
Yarrow discusses seventeenth-  
century French literature (15),  
C. M. Campbell reviews a study  
of Max Weber (16), Bernard  
Capp discusses magic and the  
making of modern science (17),  
and A. D. McGettrick reviews a  
new book on mathematics for  
computing (18)

**EDUCATION FOR JOBS** 19-24  
Jack Mansell, Alan Coss, Jenny  
Bacon, Lesha Fullek, John  
Pardoe and Mike Cooley are  
among the contributors to a  
special report on education for  
employment

**NOTICEBOARD** 25

**CLASSIFIED INDEX** 26

**OPINION** 34-36  
Tessa Blackstone discusses the  
education of the handicapped in  
Italy; J. L. Bradley reflects on  
graduate training in the United  
States; and Don's Diary from  
Bernard Waterslein of Brandeis  
University, 34  
Letters on two-year degrees,  
Wilberforce and the dismissal of  
Dr Ross Hesketh; and "Unlone  
View" from B. E. Davison of the  
APT, 35

## Next Week

Robert Skidelsky on Keynes  
Paul Calvert on bio-mathematics  
James L. Watson on Orlando  
Patterson's *Slavery and Social  
Death*  
University-Industry links after  
ACARD



HIGHER EDUCATION SUPPLEMENT  
Printed by The Times, London EC1M 4BX. Telephone 01-253 3000

## Sir Keith strikes back

Sir Keith Joseph in one sense is a lame duck. Secretary of State. Some people were surprised that Mrs Thatcher kept him on, although ideological piety was presumably an important motive, and few expect him to remain in his present office for the full term of the new Government. A gentle ascent to the House of Lords some time in the next two years is the almost universal prediction.

Yet in another sense Sir Keith is in a more commanding position than he was before the election. The number of ministers in the Department of Education and Science has been cut by one; the able Mr Waldegrave has been exported to the Department of the Environment; and Sir Keith himself has assumed direct responsibility for the key area of the education of 16 to 19-year-olds (see below). So although Sir Keith's leave in office may now be shorter, there are fewer restrictions on his free use.

This change is particularly important for higher education. Ever since the formation of the DES in the early 1960s, policy for universities and science and to a lesser extent the polytechnics and colleges has tended to be regarded as a semi-autonomous fiefdom in which the appropriate junior ministers have often enjoyed exceptional discretion over detail. Shirley Williams (in the late 1960s as minister of state) and Cery Fowler were certainly in that tradition, and so too was William Waldegrave.

This semi-autonomy of higher education policy has also been reflected on the civil servants' side. Successive deputy secretaries with this responsibility, Toby Weaver, Edward Simpson, Alan Thompson and now Richard Bird, have exercised rather more power and enjoyed rather more independence than the official hierarchy would suggest. On the other hand successive permanent secretaries, William Pile and James Hamilton, have exercised rather less influence over the making of higher education policy than might have been expected, especially perhaps in the case of the latter who was trained as an engineer.

Strong secretaries of state, of course, have never allowed their higher education fiefdom to become too independent. Anthony Crosland and Margaret Thatcher, although the latter perhaps as Toby Weaver's front-person, both played an active role. So did Shirley Williams on her return to the DES in the top job. Similarly strong permanent secretaries seek to assert their authority over their whole territory, especially in their early days before they are distracted or overwhelmed by

the larger and more political problems of the schools.

As a result of the election and the subsequent reshuffle Sir Keith has been placed in the position of a strong secretary of state with regard to higher education. Whether he likes it or not—and he probably does—he will have to become more directly involved in the details of higher education policy. In the same way the new permanent secretary, David Hancock, has a reputation as a high-flyer to live up to and so will certainly want to take a sharper interest than his predecessor.

The consequences of this more personal involvement by both secretary of state and permanent secretary in the affairs of higher education may not be welcome. Sir Keith, after all, was on the point of abolishing the Social Science Research Council 18 months ago and was only dissuaded by Mr Waldegrave. Now that Mr Waldegrave has gone and Mr Brooke just arrived, Sir Keith will presumably follow his instincts without restraint.

Cynics, of course, will argue that whatever the temporary annoyance created by allowing Sir Keith his head objective circumstances will surely rein him in. After all, it is clear that even if the Social Science Research Council had been abolished, it would have had to be reinvented immediately in some garbled form. So on the same pattern the next few months may be filled with alarms about privatization plans for universities out of which very little will come.

The new permanent secretary's impact on higher education is likely to be more down to earth but also more lasting. Mr Hancock comes from the Treasury and so may be tempted to regard universities, polytechnics, and colleges in the narrow context of public expenditure plans. This would be unfortunate because we have just spent two years trying to free higher education from the iron grip of expenditure policies that paid too little attention to their educational outcomes, which was the point of all the fudging and weaving over new blood and restructuring.

Nor is the new permanent secretary likely to be excessively patient with the policies about partnership with local government that are so important in the DES. Local authorities are not popular with the Treasury; they overspend on their current and underspend on their capital accounts in a distressing demonstration of independence. The Government, after three years of trench warfare, has decided to go onto the offensive against high-spending

local authorities. Education consumes such a large part of local authority expenditure that it is certain to be a most active front in this renewed war.

This must be bad news for the National Advisory Body. The NAB was certain to run into serious trouble anyway when it produced its 1984/85 plan this autumn. All the skill of Mr Waldegrave and all the self-control of the local authorities would have been needed to avoid the break-up of the NAB. It is increasingly difficult, but still just possible, to imagine that the fragile alliance between central and local government on the NAB can be maintained in the middle of a bitter dispute between central and local government about almost everything else.

Moreover there are still those sufficiently myopic to welcome the possibility of the break-up of the NAB and so encourage the event. Model B—the hiving off of the polytechnics and senior colleges from local authorities—still hovers there, a treacherous oasis mirage in the desert. Another key appointment yet to be announced, of Sheila Browne's successor as senior chief inspector, could have an important influence on the future of the NAB. Pauline Perry, one of the obvious candidates, was closely involved in the original proposal to hive off the polytechnics.

Perhaps too much significance is being attached to this analysis to changes in the DES that must appear to many slight. Perhaps as a result too gloomy a forecast is being made. Yet it would be wrong to underestimate the fragility of the partial and unevenly shared partnership between central and local government that has just begun to enjoy, the moratorium on further university cuts secured by the University Grants Committee and the winning back of some ground lost in the disastrous winter of 1980/81, and the establishment of the NAB as the first primitive brain of the non-university sector.

After all, an unrestrained Sir Keith may pursue under the disguise of privatization a policy of "divide and rule" among universities which would make the UGC's selectivity of 1981 appear highly egalitarian. Mr Hancock's arrival at the DES may put further cuts back on the active agenda, or at any rate halt the creeping clawbacks that have been so surreptitiously successful. The war between Whitehall and town hall may fatally destabilize the NAB experiment and lead to chaos in the polytechnics and colleges. Let us hope that none of these happens but their possibility cannot be safely discounted.

## The old and new FEs

Since the later 1970s the Department of Education and Science has quickly and surely been losing its authority in non-advanced further education. The "old FE" of craft and technician courses, in which the DES played a leading role as sponsor, has stagnated or declined. The "new FE" of basic courses for underskilled and unemployed school leavers, which is the territory of the Manpower Services Commission and its Whitehall patron, the Department of Employment, has expanded out of all recognition. The articles on our special report on education for employment (pages 19 to 24) illustrate this sea-change in the character of further education.

The erosion of the DES's position has been part design and part accident. There have been civil servants within the department who argued that this territory should be willingly abandoned to the MSC because it could take quick and decisive action while any DES effort would be delayed and diluted by the need to work through local authorities which in turn deferred, too much by implication, in the values of the teaching profession. But there can be no doubt that the DES's failure to take effective action to reform the upper secondary school, which would have involved widespread

development of tertiary colleges, has handicapped the education service in its unequal contest with the MSC.

The DES now appears to be trying to reassert itself in this key policy area. Sir Keith has publicly acknowledged his concern for "the bottom 40 per cent", those who after leaving school become the clients of the MSC, although his detailed policies on teacher training and his rearguard defence of the traditional sixth form have tended to undermine this concern. More recently he has put forward the New Technical and Vocational Education Initiative (NTVEI) under which, on an experimental basis 14-year-olds would be offered a more practical curriculum in their last years of compulsory schooling.

Now Sir Keith has taken direct responsibility for the education of 16 to 19-year-olds in the latest reshuffle of ministerial responsibilities within the DES, a sure sign that the DES is fighting back against the imperialism of the MSC and its master, Mr Norman Tebbit, the Secretary of State for Employment. Just as significantly the DES is to be given the power to make specific grants to local authorities for particular projects according to the Queen's speech. So it too can short

circuit the historic partnership with local government and the argument that the MSC can act more decisively and directly loses much of its force.

It is probably too late to do much to influence the broad thrust of the MSC's policy. Whatever mistakes it may have made, the MSC has shown an administrative dynamism that has been absent in the DES. For example, why is the Open Tech of George Tolley an MSC rather than a DES enterprise? The result is that the MSC has laid down the foundations of a new system of further education, sub-secondary education some would say, that effectively pre-empted the basic structure of the detailed schemes which can be built up.

Centralized bureaucratic control, a heavily instrumental bias (training not education), and over-reliance on the rocky good will of employers (in sharp contrast to the more equal relationship between education and employers in the original 1963 Industrial Training Act strategy) are the abiding characteristics of the MSC's approach. It is not good but it is better than nothing and probably the best that can be obtained under present conditions. Sir Keith's decision to have the DES join in the game rather than remain a sulky spectator may not be heroic but it is correct.

## Laurie Taylor



Now — script number 0027163.  
What's that again?  
I'm sorry, Professor Dewlap. Script number 0-0-2-7-1-6-3.  
Ah yes.

I don't think there's too much of a problem here. Looking across the marks it seems a pretty straightforward lower second. Very consistent set of two-two marks. Yes, on the face of it, I'd say a middling sort of lower without a great deal of upper support. Any other comments before we move on. Yes, Professor Dewlap?

Well, I can see what you mean, Doctor Wernitz, about the general lower second quality of the particular marks, but I wonder if I'm alone in detecting a slight upperish scent within the overall array.

I'm sorry, Professor Dewlap, did you say an upperish "scent"?

Perhaps "ascent" is a little strong. Let's say there's at least a hint of something a shade more lively bubbling underneath the rather bland exterior.

What — a sort of upperish liveliness?

I'm not certain that I'd want to commit myself completely, but certainly a definite intimation of something a little more than a standard lower.

But nevertheless you'd admit to the overarching blandness?

Yes indeed. No doubt about that. But how might one put it — it seems rather an interesting sort of blandness — a blandness, perhaps, which has just that slight lack of balance which carries a suggestion of farthingale maturity.

Mmmmm. I'm not certain I'd want to go all the way with you on that, Professor Dewlap. Indeed, I sense in one or two of the marks a certain thirdish quality — or rather immature, thin, yes, even stinky, character.

Oh no, surely not. I mean, I can accept that the three 54 marks are less robust than one might wish, but there's a definite sturdy, almost yeoman, quality to those two 55 marks. And alongside those, that nice rounded 57 which contains just the hint of fitness which I believe raises a suspicion of upperishness.

I'm afraid that's going much too far. I mean, look at the range — 51 to 57. Essentially loose-knit.

Not at all. Consider those two 56s. Inaccessible, I grant you. A certain closed-in quality. Possibly. But, nevertheless, absolutely no lack of body.

Well, Professor Dewlap. I'm afraid that we must disagree. Perhaps our external examiner has an opinion which might help resolve this matter.

Thank you, Doctor Wernitz. Most interesting comments all round. But I really do feel that we are all getting far too carried away by mere impressions. This is candidate 0027163 is it not?

Yes indeed, sir.

Then I think the matter is easily resolved. Certainly when I received these scripts I rather agreed with Professor Dewlap about their possible upperish quality. But when I came to re-examine them in my hotel room last night I found them to be of a thoroughly lowerish character.

You mean?

Exactly. There can be no doubt that a lower is the proper mark. However initially attractive, this candidate clearly does not travel well.

© TIMES NEWSPAPERS LIMITED, 1983  
Published by Times Newspapers Ltd, P.O. Box 7, 200  
Oxey's Inn Road, London WC1X 9EZ. England.  
Typesetting by Computer Graphics Ltd, 31-41 Compton  
St, London EC1A 1BB, and printing by Northampton  
Machinery Co. Ltd, Upper Mills, Northampton  
NN1 3JH. Friday, July 7, 1983. Registered as a  
newspaper at the Post Office. ISSN 0049-3929

# The Times Higher Education Supplement

July 8, 1983 No 557 Price 50p

## Design students go to town to show their work

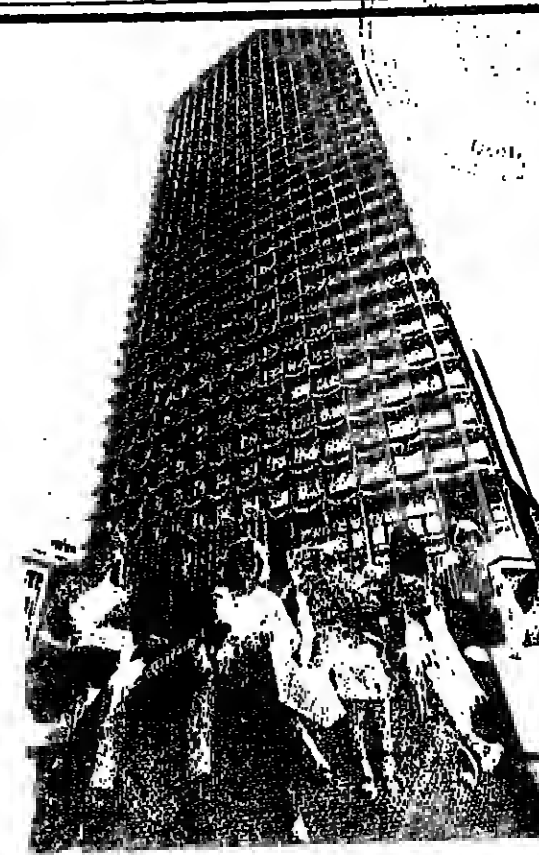
Graphic design students from Brighton Polytechnic spared no expense when they took over London's Grosvenor to show their final year work to prospective employers.

The show set the students back £1,800 but they reckoned it was worth it to have their designs exhibited in the heart of London. It was the first time Brighton's students had taken such an initiative but Mr Tony Cobb, head of the visual communications department, feels sure that future generations will keep the tradition going.

Last year the students were bitterly disappointed when a rail strike prevented agents and publishers from travelling to their show in Brighton. This led to this year's desperate measures.

Six final year students spent the year organizing the show, raising money from parties, jumble sales and raffles. Steven Charlton, the treasurer and one of seven students who got a first this year said the students had been unhappy about ability to attract potential employers over the past few years.

"After all that work for the diploma show, it was very disappointing and so we decided to just get mum and dad and friends turning up. I think this show should get to the people we want to reach and should be as good for the college as for us."



## NAB asks for cuts burden to be eased

by John O'Leary

The National Advisory Body this week made its first approach to Sir Keith Joseph, Secretary of State for Education and Science, to lighten the burden of cuts it is expected to make for 1984/85. Its committee will meet Sir Keith to spell out the options for funding levels and access before deciding on student numbers for polytechnics and colleges.

Local authority leaders refused to see this second successive time to set student targets for 1984/85, although the planning exercise to distribute places on the basis of a 10 per cent overall cut in budgets will continue on the assumption that recommendations put by Mr Christopher Ball, chairman of the NAB board, are accepted. They would result in the loss of 5,000 full-time places in first-year enrolments for 1984/85 and a 14 per cent reduction in funding levels per student.

Members of the committee were concerned about the consequences for standards in colleges and polytechnics if funding levels were reduced too far, while not wanting to reduce access to qualified students. Their terms of reference allow them only to advise on the distribution of the advanced further education pool, but their approach to Sir Keith is clearly an attempt to persuade him to increase its size.

Mr John Bevan, secretary of the NAB, said that the committee would take the decision on the balance between access and funding levels, but it wanted Sir Keith to be fully aware of the conflicting pressures operating. The delay is not expected to affect the

timetable for the NAB exercise, which has already been altered once because of the general election.

The reasons for the committee's concern immediately became clear with the publication of comparisons made by officials at the Department of Education and Science of costs in the universities, local authority institutions and voluntary and direct grant colleges.

The paper, which will be presented to the NAB board and the University Grants Committee, foresees the universities overhauling polytechnic and college unit costs and forging ahead if present student enrolment plans are retained. By 1985/86 the voluntary and direct grant colleges would be the most generously funded institutions for classroom-based courses.

According to the DES calculations, which make numerous adjustments to allow for differences between the sectors, local authority institutions began the decade with unit costs for classroom courses £150 higher than the universities now £80 per student better off even after allowing for local authorities topping up budgets. By 1985/86, the universities' unit cost on present planning assumptions will be £2,500 (allowing for the deduction of 25 per cent for research time) compared with the local authority figure of only £1,960. Over five years, the polytechnic unit cost will have fallen by more than £700, while the universities' will have dropped by only £20.

Mr John Bevan, secretary of the NAB, said that the committee would take the decision on the balance between access and funding levels, but it wanted Sir Keith to be fully aware of the conflicting pressures operating. The delay is not expected to affect the

## De la Salle threat averted by promised review

Sir Keith Joseph, Secretary of State for Education and Science, has backed down on his refusal to reconsider the withdrawal of teacher training from De la Salle College, Manchester, on the eve of an action against him in the High Court.

Governors of De la Salle agreed not to pursue the case, which was scheduled to take place yesterday, after hearing reports of a meeting last week between Sir Keith and Roman Catholic

bishops. They had been seeking a judicial review of his action in withdrawing initial teacher training, effectively closing the college.

New talks will take place during the summer between the college authorities and the Department of Education and Science, allowing Sir Keith to "review afresh the original decision."

Brother Wilfrid, the college principal, said this week the governors welcomed the decision and regarded it as a

## CNAA heads bid for Bedford site

by Felicity Jones

The Council for National Academic Awards is trying to create a consortium of educational bodies to buy the lease of the prestigious Regent's Park site of Bedford College, London.

Overcrowding at its present headquarters has forced the CNAA to think seriously about new buildings and its healthy financial situation puts the council into a strong position.

This year the council made a £2.4m profit. A meeting of its general committee this week agreed estimates which anticipated a further surplus of £1.5m in 1983/84 and to maintain student fees at their present level for another year.

But Mr Brian Overy, the CNAA secretary, said that in spite of its profits the council could not consider buying Bedford College single-handed. He said that for the first time the council could consider putting cash on the table but the cost would mean cutting into a substantial slice of its investments.

The council did not actively look for another building until the Regent's Park site came on to the market which was described as offering "a prestigious HQ for the CNAA for the next 20 years". Mr Overy said that three educational bodies had been approached to form a consortium but discussions are still at a very early stage.

Even with a consortium, the CNAA could not afford the £16m which Bedford College would cost.

continued on page 3

## Sir Keith floats voucher plan for universities

by Ngao Crequer

Sir Keith Joseph, Secretary of State for Education and Science, has asked his civil servants to carry out a confidential but detailed study of the feasibility of a voucher plan for higher education.

This emerged from a meeting on Monday between Sir Keith and the vice chancellors of Aston, Salford, Strathclyde, Leicester, and Durham universities. But his decision is in sharp contrast to his admission in the House of Commons on Tuesday that a similar voucher scheme for schools would run into "great difficulties in turning the idea into practicality."

Under such a scheme all students would receive a voucher equal to the cost of their chosen course and would be free to "spend" it at any institution. Also discussed was a proposal to allow universities to admit more home students than allowed by their University Grants Committee quotas if the extra students paid full cost fees.

The meeting, described by one participant as "splendidly chaotic" considered a background paper prepared by civil servants on ways of giving universities greater financial and academic control.

But this was given less serious consideration than a general rumble through a number of more pertinent issues, including: how to get round UGC student targets; how to change the university fee structure; how to improve teaching and still maintain research; how to increase non-UGC income; whether academic salaries should be fixed locally; whether the universities could cope with more change; the attractions of a voucher scheme; and the problems of managing the universities.

Also at the meeting were Mr Peter Brooke, under secretary for higher education, Sir Edward Parkes, the outgoing chairman of the UGC and his successor Sir Peter Swinnerton-Dyer.

Participants discussed whether there should be wholesale change in system. Professor Fred Holliday of Durham strongly agreed, or just minor changes. It was pointed out that the former would need legislation and would create enduring controversy, the most interested in experimenting. The vice chancellors were keen on ways of increasing the inter-university competition. The size of institutions would depend on the number of

voucher holders they could attract. There was general agreement that the fee system needed overhauling with complaints that universities could take as many overseas students as they wished but a limited number of home students, even if of a higher standard. This led to the suggestion of being able to admit more who could pay the full cost of fees.

There was constant reference to practice in America. Some vice chancellors wanted to be able to pay staff their own rates.

Research also came up, with Sir Peter mentioning again his distinction between scholarship and research. Sir Keith was unhappy about the quality of some of the teaching and the vice chancellors accepted it could be better.

Sir Keith realized that the universities could not attract large sums from industry during a recession. Professor Ashworth and Sir Edward emphasized that small amounts of help could be crucial.

Mr Maurice Shuck of Leicester University said one had to consider why the nature of flow from Government to the universities was being altered without changing the amount or rate.

Papers examining some of the ideas will now be prepared and followed up in the autumn.



How science can mimic nature, 12

Slavery and social death, 14

Robert Skidelsky on Keynes, 13

## Poly directors select new nominee

The Committee of Directors of Polytechnics this week chose a new nominee to the National Advisory Body board, following the CDP chairman Dr William Birch's resignation from it and a request from the Department of Education and Science for a replacement.

Dr Birch's replacement, whose identity has not been revealed, is not a CDP officer — an indication that the committee has supported one of his arguments for resigning. He claimed that the chairman of the NAB, Mr Christopher Ball, appeared to find difficulty in distinguishing between his role as CDP chairman and his status on the NAB board in a personal capacity.

Dr Birch said in a letter to all members of the CDP that this was a subsidiary reason for his resignation. His main reason was the constraint

on the board by "a narrow interpretation of its terms of reference", he said.

This narrow interpretation was affecting the current retrenchment and planning exercise by giving it an over tight time-scale with insufficient discussion of important issues; by not allowing for an agreed strategic planning framework which came to terms with the decision between concentrating resources or spreading them more thinly; by not allowing for transitory discussions, and by consequently expecting the public sector to deal simultaneously with increased numbers and reduced resources.

A CDP official said it shared the deep concern about the operation of the board which led to Dr Birch's decision and it fully understood and supported his reasons for resigning.



## Academy changes its style

by Paul Hather

The British Academy is now prepared to take over control of postgraduate awards in the humanities providing the Government comes forward with firm guarantees that funding and numbers will be maintained.

Such a move would herald a far-reaching change in the style and type of work so far carried out by the academy as a non-political academic society, as well as almost quadrupling its annual budget to around £12m.

Fellows of the academy, who number about 400, will be asked to approve the move in principle at their annual general meeting next Tuesday. The Queen is also to visit the academy that day to mark the formal inauguration of its new premises in Cornwall Terrace, north London.

Education ministers and civil servants at the Department of Education and Science, which currently supervises humanities awards, have been keen to rid themselves of the task for a couple of years on the grounds that it is an academic task best done outside Whitehall by academics.

The issue has been keenly discussed on the academy's council with some fellows arguing that supervising the awards - about £70 a year with an £8m budget - would give the academy a greater presence on the higher education stage.

Others felt that perhaps it might impinge on the tradition of the academy as the premier learned society in the humanities and social sciences, set up in 1910 for the promotion of historical, philosophical, and philological studies.

In the end, fellows feared that the DES in its keenness to pass on the task under pressure from Sir Keith Joseph, the Secretary of State for Education, might be tempted to set up a new body which might effectively become a humanities research council. Sir Keith is keen to see Whitehall interference reduced wherever possible.

Discussions between the DES and the academy are continuing but if guarantees on future funding are forthcoming and the academy's extra administrative costs are met, the full transfer could take place in April 1984.

The academy is keenly aware of the danger of being left in a few years' time with the task of cutting the number of awards and being hostile from the universities. But fellows would be able to influence the distribution of awards.

Awards would still be given out by a series of panels with wide membership including academy fellows. The process is currently supervised by a selection committee chaired by Dr Albert Sloman, vice-chancellor of Essex University.

Earlier this year, the DES asked universities to improve the completion rates of their students who win humanities awards. A first DES survey of completion rates showed 42 per cent of those winning awards in 1972 had not gained a PhD by 1982. This would be another task for the academy.

## Chess moves

Humbert College of Higher Education's new director is Dr John Eads. His appointment was announced this week in a chessboard move bringing him from the post of assistant principal of Sheffield City Polytechnic to Humbert, while his predecessor there Mr John Stoddart, becomes principal of Sheffield.

## Secretary of state gives go-ahead to Southbank Technopark

Mr Patrick Jenkin, the new Secretary of State for the Environment, has overruled local council opposition to South Bank Polytechnic's proposed technopark and given it full planning permission.

Mr Jenkin's decision follows a long delay caused by the general election after a DOE inspector recommended approval for the £4.5m technopark. It is the latest move in a bitter squabble between the polytechnic, the Prudential Assurance Company which is providing most of the funding, and the London borough of Southwark.

Southwark agreed in principle with the plans for Britain's first inner city



The University of Essex has won an Essex County Council contract to help turn a waste disposal site at St Oysth into a nature reserve and picnic area. The university's department of biology aims to produce an attractive greensward supporting a mixture of wild flowers. Here, Dr Dave Roberts, who will lead the research team, visits the newly-levelled site where he hopes to introduce, and snuff out the coarse grass he hopes to discourage.

## Senate rejects forced redundancy

by Ngalo Crecquer

Aston University senate has decisively rejected any attempt to introduce a policy of compulsory redundancies for academic staff.

But its council, which meets next Tuesday, is certain to discuss notions aimed at implementing compulsory staff dismissal.

The Association of University Teachers successfully argued in the High Court, however, that its writ to prevent Aston from sacking staff should not be heard until after the council meeting.

Last week the executive of Aston senate pressed the council to consider implementing a compulsory dismissal policy in departments which exceeded the minimum staffing range. But instead a totally contrary motion was passed, by 29 votes to 2, with six abstentions, stating that the senate's previous policy of opposition to compulsory redundancy should be endorsed.

At the end of last week the AUT asked a judge in chambers to defer the action which will test whether under its charter the university is empowered to sack tenured staff.

The AUT argued that if the council decided next Tuesday not to proceed with compulsory redundancies, the court hearing would have been a costly waste of time. The AUT had no wish to incur unnecessary costs.

Aston recently resisted the plan saying that everyone was ready to

proceed. Any delay would cause inconvenience and the question was one of supreme importance for Aston and for other universities.

The judge granted the adjournment on the grounds that unnecessary expenditure would be incurred if the council decided not to proceed with redundancies.

At the council meeting the AUT has proposed a motion rescinding the original motion introducing the possibility of compulsory redundancy. Another motion recommends that the University Grants Committee voluntary severance scheme should be extended until September next year, that the university should use its own money to fund more voluntary retirement and that there should be more encouragement for retraining or redeployment.

Nearly 200 staff have already left Aston voluntarily. Mr Brian Everett, the AUT regional organizer said: "Aston is in danger of becoming the parish of the university system. Other universities which are left with similar problems of academic balance after the cuts will not be very impressed if Aston cannot, like them, manage to solve its remaining problems peacefully."

An industrial tribunal has ordered that a short contract researcher at Aston University has a right for her case to be heard on its merits and that a reserved decision against her be set aside. The case depends upon an interpretation of continuous employment.

## Merger college governors protest to DES

The governors of the City of Liverpool College of Higher Education plan to write to the Department of Education and Science to protest about the constitution under which it will merge with the city's polytechnic.

The Labour-controlled city council has proposed that the new merged institution should be governed by the same instruments and articles drawn up for the merger between the polytechnic and J. M. Marsh and F. L. Calder colleges.

The council hopes that the merger will be in effect by September but the COLCHE governors say that it is being rushed through without due consideration being given to the achievements and status of the college.

A governor's meeting last week

strongly rejected the "rubber-stamping" of other constitutions. An amalgamation a few years ago to form the constitution took care to treat each constituent properly and the way in which the present merger is being handled does not match up, they claim.

The governors complain that they were only given the proposals orally by an education officer and that a shadow governing body for the new City of Liverpool Polytechnic still has not been established. Decisions are being taken by the polytechnic on its own.

Other important points such as representation of the University of Lancaster, which validates the college degree courses, on the new governing

body have not been taken on board. Dr Ian Porteous, senior lecturer in mathematics at Liverpool University and an elected member of the COLCHE governors, said that it was essential that further consideration was given to this in the constitution.

"The existing courses have to be safeguarded for quality," he said. "Already students are talking about giving up courses and suing for breach of contract."

"The council is trying to rush this merger through and kill the college stone dead. Morale is very low at COLCHE and it has been very shamefully treated. It was not for nothing that the principal resigned recently," he added.

## Call for paid leave for all

The Educational Institute of Scotland has called for a statutory right to paid educational leave for all.

Mr Arthur Houston, the EIS further education officer says in a reply to the Manpower Services Commission's document *Towards an Adult Training Strategy* that access to continuing education is both an individual right and fundamentally necessary to the development of a healthy society and economy.

The EIS is highly critical of the document, condemning its "underlying approach" which "seems to exclude the role of the individual as the prime determinant of her or his needs". It makes a distinction between education and training, said the EIS document, and takes a "marketplace" attitude which "ignores that for most people work is something that has to be done to enable other things to happen in their lives, reinforces the view that any education except job training should be preferred for an elite of those post-16, and completely fails to understand the real relationship between experience and learning."

The MSC has ignored the problems of promotion of equal opportunities and an end to sex stereotyping in employment, says the EIS.

## Fernandes loses support from Natfhe

by David Jobbins

Leaders of the college lecturers' union this week voted against continued support for one of their members at Hendon police school who leaked essays displaying racist attitudes to the media.

Explicit reference to support for Mr John Fernandes, who has said he has given up hopes of regaining his job at the school, was deleted from a motion considered in private by the national council of the National Association of Teachers in Further and Higher Education.

Before the meeting there were potentially ugly scenes when representatives of the Fernandes support campaign and black trade unionists' action groups refused to leave the hall where it was to take place.

Several members of the union's outer London region had entered the hall to remonstrate with their delegation which was to propose an amendment deleting reference to support for Mr Fernandes. They felt this was contrary to established regional policy. They were joined by black trade union activists angry that Natfhe should be seen to be compromising its anti-racist stance.

The situation was defused when president Mr Cecil Robinson agreed that a black trade unionist, Mr Beattie Grant should be allowed to speak to council members before the formal session.

Mr Grant claimed the union's attitude during the affair displayed "institutionalized racism".

But in the following debate criticism of a national executive working party's report on the affair was defused, but the right of teachers to oppose racism and a recognition of the dangers to academic freedom from external funding agencies such as the police were adopted by council.

During the debate, Mr Frank Griffiths, who chaired the NEC's inquiry, said that the problems of defending Mr Fernandes against his arbitrary exclusion by the school's principal had been made worse because he had approached neither his colleagues at the school nor his union.

Council's decision effectively marked the end of the Fernandes affair, given that civilian teaching at the school is being taken over by the neighbouring Barnet council from September.

## Row brews over council YTS staff

College lecturers are to discuss with other public sector unions ways of ensuring that the off the job component of the Youth Training Scheme stays in the colleges.

The national council of the National Association of Teachers in Further and Higher Education criticized attempts by some local authorities to set up their own agencies employing staff on salaries and conditions of service inferior to the Burnham agreement.

And Mr Cecil Robinson, the union's president, this week attacked South Tyneside authority in particular for setting up an agency when college lecturers in the authority faced redundancy.

"If such crude and deliberate attempts by local authorities to undermine rates of pay and conditions of service within further education continue, there will be fierce opposition to this association," he said.

YTS schemes in these local authorities from this association," he said. "This is not just a traditional trade union response to attacks on its members but arises as well from a professional concern to protect the quality of YTS and the young people on schemes."

Mr Robinson's claim that college lecturers were best equipped to aid YTS trainees was dismissed by Mr Kenneth Stringer, South Tyneside's director of education.

He also denied the suggestions that the agency was an attempt to undercut Burnham scales or that the authority's two colleges were faced with a serious redundancy problem. One person seconded for a year 12 months ago faced redundancy, he said.

## ILEA review may want polys to merge

by Karen Gold

The merger of the Polytechnic of Central London and the City of London Polytechnic is likely to be recommended by the current Inner London Education Authority review of advanced further education.

Combination of those two of London's five polytechnics would create the largest law faculty in Europe, as well as potentially enormous institutions with around 8,000 full-time students and up to 25,000 part-time ones.

It would also solve certain practical problems facing the authority: the fact that while most of PCL's buildings are owned, most of City's are on leases approaching the end of their life and the need for renegotiation; and the still undecided future of the rectorship at PCL.

## Treasury relents on clinical pay

by David Jobbins

Vice chancellors have persuaded ministers to help them pay 3500 clinical academics the 8.7 per cent salary increase already awarded to National Health Service doctors.

The Treasury has agreed to relax the 1983-84 cash limit to allow an extra £15 m which will partly finance the award. It represents about two-thirds of the gap between the 3.5 per cent cash limit and the NHS award.

It is the second year running that ministers have helped bridge the gap - last year 70 per cent of the difference was found.

But this year the task of meeting the remainder falls solely on universities with medical schools. The burden is not to fall on the whole system. And when the employers meet staff negotiators to formalize the 8.7 per cent offer they will make plain the consequences for staffing levels in the medical schools.

But as one pay crisis ceased another took its place. University manual workers this week rejected the employers' offer of a £3.30 a week flat rate increase.

Members of the National Union of Public Employees turned it down by 4,536 votes to 3,364, and it was a small panel of experts drawn from the industry, universities, and the SERC. The CEBG co-funding panel has already met and allocated the first four of its grants.

These are to Aston University for an investigation of electrical breakdown, to Reading University for work on tidal power, to Loughborough University for work on holographic imaging, and to Imperial College, London, for studies of the flow of pulverized fuel particles in burners.

A new report aiming to promote

the ILEA review is approaching the end of the consultation period, and has just brought together a small advisory group including polytechnic directors and trade union representatives to discuss options for the education officer's report.

As well as the City/PCL merger, which is the most likely, Thames Polytechnic is also a candidate for merger, with talks continuing on the possible "polyversity" link-up with London University's Goldsmiths' and Queen Mary colleges, City University and Avery Hill College.

London's art colleges are also high on the list for new arrangements, with talk of the creation of a single federal art college out of the present four.

The education officer's recommendations are likely to be prepared and considered by members of the

for full-time students around a pattern of part-time provision taking travel time and transport facilities into account, the paper says.

The Government will abolish the ILEA at the same time as the Greater London Council, and replace it with a joint board of elected representatives from inner London boroughs and the City, Mr Robert Dunn, under secretary of state at the Department of Education and Science, told Parliament in his first session answering education questions this week.

A White Paper will be issued on abolition later this year, and consultations begin as soon as possible, he said. Sir Keith Joseph, secretary of state, said the ILEA was the most extraordinary authority in the land. A joint board to replace ILEA might be more attentive to value for money, he said.

ILEA should structure its provision

## Salary rise sparks row over SERC grants



Professor Kingman: grants warbling

chers, the minimum rose by 13.7 per cent, from £5,550 to £6,310.

In contrast, the SERC budget is indexed at 3.5 per cent and it has no reserve funds to fund the difference.

Mr John Akker, deputy general secretary of the Association of University Teachers reacted strongly to the news of Mr Kingman's letter. "It is about time the research councils, and in particular the SERC recognized their responsibilities to the research staff they fund."

"The AUT is pleased that some staff have received substantial increases particularly at the bottom end but Professor Kingman's letter is, as John McEnroe would say, the pits. He obviously has not realized that it was the Department of Education and Science who approved this settlement in Committee B."

## State industries support energy research

Energy research in the universities is to be boosted following agreements for joint funding just completed between the Science and Engineering Research Council and three nationalized industries.

It is the first time nationalized industries have been involved in such schemes designed to promote high quality research which is at the same time relevant to the needs of industry. Discussions started two years ago.

The new schemes will involve the Central Electricity Generation Board, the British Gas Corporation, and the National Coal Board, with spending on each rising to about £250,000 a year, half to be met by the SERC. The schemes will be reviewed after three years.

Each of the three public corporations will continue supporting their current portfolios of university research through fellowships, research contracts, and linked studentships. The CEBG already spends more than

£500,000 a year on such support, the BGC about £700,000 and the NCB about £400,000.

The schemes were described in London this week by Professor John Kingman, the SERC chairman, as a cohesive effort in the energy industry to channel research into relevant areas. Broadly the industry will decide the content of the research programme, while the SERC maintains academic standards.

Each scheme will be administered by a small panel of experts drawn from the industry, universities, and the SERC. The CEBG co-funding panel has already met and allocated the first four of its grants.

These are to Aston University for an investigation of electrical breakdown, to Reading University for work on tidal power, to Loughborough University for work on holographic imaging, and to Imperial College, London, for studies of the flow of pulverized fuel particles in burners.

A new report aiming to promote

## Scottish minister favours a MacNAB

The long-awaited decision on the Scottish Council for Tertiary Education's report is likely to come within the next two weeks.

Mr Allan Stewart, Scottish Office minister for industry and education, has said he is "very confident" a statement will be made before the parliamentary recess.

A year ago the Tertiary Council produced both a majority and minority report, the majority report recommending that advanced further education should be run centrally, with non-

## CNAAB heads bid for Bedford site

educational bodies.

Part of the terms of the lease as a Crown property is that the site of the college, surrounded by rose gardens and a lake, has to be put to an educational use. Interest has also been shown in Japan and the Middle East.

Mr Digby confirmed that the CNAAB had been in touch but said that it would be premature to say that anything had been agreed. A clearer picture of the field of interested parties is expected by the autumn.

The price will depend on the length of the lease and the use which is planned for the buildings. But Bedford College wants to recoup as much as possible to offset the cost of merging with Royal Holloway College.

Bedford needs to furnish its new site at Royal Holloway College, Egham, in Surrey, and is only prepared to offer an amount in single figures.

Bedford College says that it has not yet entered any serious negotiations with any buyer. The college's agents, Hillier, Parker, May and Rowden have had over 2,000 requests for brochures and 250 enquiries for additional details.

Mr Michael Digby, a company partner, said that there had been a lot of preliminary inquiries from America and it was conceivable that a United States university would take the lease and act as a consortium for other

## Court votes again on polyversity

Pressure is mounting within the New University of Ulster, particularly in the senate and council to ensure that its court's failure to back the merger with Ulster Polytechnic is reversed later this month.

Sir Robert Kidd, the chairman of the NUU's council, has written to Sir Peter Swinerton-Dyer, chairman of the steering group overseeing the merger, urging him to consider the court vote no more than a temporary setback.

The letter, which has also gone to Mr Derek Birley, the vice-chancellor designate of the new institution, and to the Northern Ireland Department of Education, points out that almost immediately after the court vote both the senate and the council passed unanimous motions of confidence and support in the merger.

It says the council wants the NUU to continue to participate fully in the planning of the new institution and particularly hopes that its representatives can continue to sit on the steering group and merger working parties.

Sir Robert adds that the council, the senate and senior officers of the University are optimistic it can still be associated with the merger.

The council also agreed to put the same motion again before the court at another meeting on July 21. Last week the motion received only a 63 per cent majority instead of the 75 per cent needed to give the university permission to petition the Privy Council with the polytechnic for a new charter.

At a joint meeting, members of the Association of University Teachers and the National Association of Teachers in Further and Higher Education went to seek urgent meetings with Mr Nicholas Scott, the Northern Ireland minister for education, and Sir Peter, to emphasize that it would be intolerable for the NUU to be forced to close as a result of action by a minority of court members.

Sir Peter, chairman of the steering group said the necessary documentation for a charter for a polytechnic university, could be with the Privy Council by the end of this month.

"As for the NUU, the Government has said with ringing clarity 'merge or close'. This must mean merge or we will taper off your grant as removing the charter against its will is intolerable," he said.

"Fortunately the steering group will not be involved in that side of things. What now happens to the NUU is irrelevant to the steering group."

As for NUU staff who still might want to join the new institution he said: "I would hope that they are not put in an intolerable position. We might be able to hold out a hope for them."

Leader, back page

## Courses

### MONTESSORI WORKSHOP

Professional introduction and opportunity to study the Montessori Method of Child Education is open to Teachers and Student Teachers at a Montessori Workshop being held by the London Montessori Centre from July 18-28.

Syllabus includes: - Montessori Principles of Education, Psychology of Learning, Environmental Studies, Practical Training in the use of Montessori Didactic Apparatus for Sense Training, Mathematics, and Reading.

For registration application, approach Clam Mackay, Workshop Registrar.

London Montessori Centre

141, Tottenham Court Road, London W1P 0LP



## Putting geography on the map

by Paul Flather

British geographers have prepared a strategy paper to sharpen up the public image of their discipline which they believe is "rather neutral, frequently obsolete, and sometimes contemptible".

The paper has already been discussed favourably at the highest levels of the three main societies representing geographers: the Royal Geographical Society with 8,188 fellows, the Geographical Association, with 6,170 members mostly school teachers, and the Institute of British Geographers.

The paper is the work of a joint committee in higher education set up last year following concern about the image of geography. It was the first committee to involve official representatives from all three main societies.

The committee is particularly concerned about the current and future role of geographers and geography in society, implications for curriculum and research, and the need for an active public role.

It is unclear that the task of promoting geography is seen in the interest of

society rather than the defence of geographers in their professional interests. Senior officers of the three societies are to meet in September to discuss finding and action on the paper.

Among the "needs" listed in an appendix are:

- to present geography as both exciting and relevant to issues which command widespread concern;
- to promote the adaptability of geography graduates as employees;
- to present geography as analytical as well as descriptive;
- to stress space, environment, and their implications as the distinctive focus of modern geography;
- to review at every level the curriculum both as preparations for citizenship and in view of contemporary social needs.

Dr Ralph Hebdon of Sheffield Polytechnic, a committee member, said: "We suspect geography has a zero-image. People do not react to it positively, usually regarding it as something they did at school. We feel geography has a vital role in protecting and extending the quality of everyone's life."

## Kingston agrees to moratorium

by Karen Gold

A moratorium on all but essential spending has been agreed between Kingston Polytechnic and its local authority until a £400,000 shortfall in the polytechnic's 1982/83 budget has been solved.

The moratorium, which has just begun, includes a ban on the purchase of all library books, filling of unfilled research assistant posts, and all academic staff travel to conferences.

Two separate investigations into the cause of the shortfall in the polytechnic's £18m budget have begun: one by the director, Dr Robert Smith, and the other by the auditors serving the Royal Borough of Kingston upon Thames who would normally examine the polytechnic's accounts at this time of year.

Early investigations show that around two-thirds of the deficit is due to overspending, and the other third to the incorrect assumption by the polytechnic that the Government would raise student fee levels in line with inflation, according to Kingston's director of education Mr Robert McCloy.

A special committee of polytechnic governors has been set up to consider action on the overspending, which was spread over various areas including the refectory, library and staffing, said Mr McCloy. Some of it will also be passed on to the budget of future years.

But the news of this cause of widespread dismay in the polytechnic where one compulsory redundancy was announced last week: that of a member of staff formerly employed in the polytechnic's school of liberal studies which was closed down last autumn.

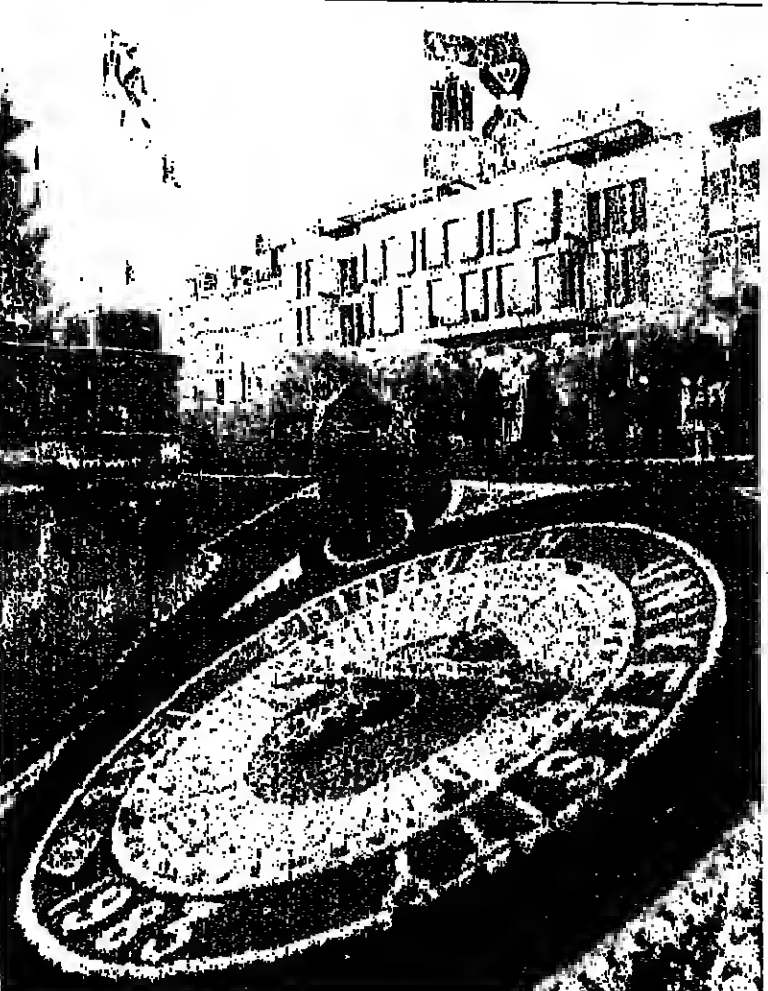
The redundancy has to be confirmed by a special committee of the education authority, which meets to consider it on July 18. More than 30 redundancies among non-academic staff were also announced last week.

Members of the National Association of Teachers in Further and Higher Education at Kingston this week expressed their grave concern about the financial and managerial systems currently operating and their dissatisfaction at the outcome and impact on staff, a Naffhe branch official said.

## 'Trinity' meets

The councils of King's, Queen Elizabeth and Chelsea colleges at the University of London were meeting this week to discuss final acceptance of the merger plan.

If all three agree to proceed, a legally binding instrument will be drawn up to facilitate transitional government by the "trinity". A charter will also be drawn up which is likely to be based on one of the three colleges' existing charters, rather than a completely new one, to limit possible difficulties with the Privy Council over tenure. Finally a detailed academic plan will be prepared which will plot departmental and staff moves.



Edinburgh University's 400th anniversary celebrations opened officially last weekend when the Lord Provost, Dr Tom Morgan, unfurled a university banner above the city's floral clock which also marks the anniversary.

Dozens of Polish doctors came from all over the world in an emotional prelude to the celebrations commemorating the establishment of the university's Polish medical school. Dr Wiktor Tomaszewski, a former lecturer there, and Dr M. J. Szamocki, a graduate, presented the university's principal, Dr John Burnett, with a history of the school and two commemorative medals.

## First create the right climate

A general climate of adults' expectations of training and education needs to be created over and above any adult training strategy, the Association of Vice-Principals of Colleges says in its response to the Manpower Services Commission's discussion document.

Training and education are so interwoven that it would be shortsighted to ignore other aspects of adult education, it says. Guidance on "return to study" would be needed for people who had been many years outside any educational establishment.

A full-scale review of student financing has been called for by Mr Neil Stewart at the outset of his second term of office as president of the National Union of Students.

"The current system of awards is one of the most organized and well-documented systems of injustice in the welfare state," he claimed.

Talking to the first official gathering

Geographers argue that as "space scientists" they have a key role to play in modern society in such matters as industrial and regional policy, recreation planning, inner city development, combating pollution, and resolving countryside "conflicts".

They fear that their poor image is costing them their fair share in the scramble for resources in higher education. They also feel the research councils have not been giving them enough. The IBG is already looking at ways of improving members' grant applications.

Recent surveys have confirmed fears that geography provision is declining. A survey last year of public sector colleges revealed severe cuts in field-work opportunities, an essential requirement for teacher training qualifications, and worsening student staff ratios.

Another survey last year of teacher training showed a 6 per cent fall in staffing down to 209, an 8 per cent fall in secondary school courses, and an 18 per cent fall in student numbers to 1,602 in one academic year between 1979 and 1980.

## Unilever boss mourns university isolation

by John O'Leary

British students' view of industry is the most distorted of any country in the developed world, the chairman of Unilever, Mr Kenneth Durham, claimed in a paper to a conference held in London yesterday.

Mr Durham told the conference on future collaboration between industry and higher education, organized by the Institute of Manpower Studies with The THES, that the invaluable talent within the universities remained largely isolated from industry. Attitudes needed to be reviewed critically.

He said: "I still see quite a number of students and the better ones even today choose academically, merchant banks and somewhere down near the bottom of their list is industry. My company has manufacturing operations in 75 countries and nowhere else, certainly in developed countries, is the situation quite so unreal as it is here."

"So working constructively with higher education isn't too easy. But I have to admit that we in industry must also take a share of the blame." Included among these were the short timescale within which industrial projects tended to operate, the poor image of management relations and the lower status and slower promotion of those on the technical side, compared with accountants or marketing staff.

Mr Durham said the Government had a role to play in encouraging a change of attitude to industry and,

through its fiscal policy, stimulating cooperation. "The proper function of government is to help create conditions in which university-industry relationships can flourish without defining, directing or unnecessarily regulating the relationship," he added.

Research, technology and recruitment were identified as three specific areas where cooperation was important. In research Mr Durham complained of a lack of active collaboration, leaving industry without a picture of which of the multitude of projects had potential importance for future economic success.

Ironically, he singled out the Agricultural Research Council, which was nominated for severe cuts in the Government's latest expenditure plans, as the best example of an academic institution serving an industry. Similar linkages were lacking in the physical and biological sciences, he said.

More active co-operation research projects might involve universities carrying out exploratory work for companies considering expensive programmes or universities being commissioned for projects in which they had special skills. Mr Durham believed there was scope for industry to take the initiative in collaboration on technology, while it remained essential for contact to be retained to ensure an adequate flow of recruits into all aspects of industry.

The missing links, page 9  
Leader, back page

## Industrial 'brokers' called for

The best way to link higher education and small or medium-sized firms is a well-staffed widespread broker system, according to the director of Newcastle Polytechnic, Professor Loring Barden.

A passive information system about what educational institutions can provide is not enough for small firms, which are generally suspicious and "unwilling to make the first move in exposing their problems, and do not respond to advertising," he told the conference.

Brokers based in industrial and commercial territory can "profile" a firm over two days, converting the problems it is perceived to have into realistic information and innovation needs and an analysis of market opportunities.

He quoted the Tyne and Wear Enterprise Trust, with 20 full and part-time agents and £1.5m funding over three years, as a good example of the way brokerage could work in encouraging small businesses to see where higher education could help.

The institutions themselves needed industrial liaison units to ensure their services were best presented, and to educate their students for entrepreneurship so that they no longer considered themselves as potential employees but as employers.

Industrial and academic registers of the small and medium businesses in the area and of the higher education expertise should be drawn up. But Professor Barden also pointed out that industry was slow to value what higher education could provide, and to look forward rather than backwards in deciding its training needs.

The Health Service had worked closely with Newcastle Polytechnic to develop a comprehensive range of courses including those taught by polytechnic adult NHS staff. "If industry could organize itself to articulate its needs, and collaborate in the design and teaching of courses... then there would be no need for reports such as Finiston," he said.

"Clearly college staff working on integrated degrees need to become more knowledgeable about the industrial scene but this takes time and money and a motivation which does not exist so readily in college as does that for doing research and for publishing papers in furtherance of individual careers."

"Archae" funding methods were based on the assumption that there was little or no collaboration between industry and colleges.

## Students 'worse off' than jobless college trainees

would continue to examine the adult support system and hold widespread consultations.

Mr Stewart commented: "We look to Sir Keith to stick to his word and come forward with some concrete proposals to end the injustice of the present system."

Chief among these was that a further education college student who "re-

ceived no financial assistance might be sharing a classroom with a Youth Training Scheme trainee receiving £25 a week for doing the same course.

"This can only lead to hopeless divisions between students with a little hope but no money, and trainees with a little money but no hope," Mr Stewart said.

## Competition with a prize that's out of this world

by Olga Wojtys  
Scottish Correspondent

Cambridge, Edinburgh and Cardiff are understood to be among several universities interested in establishing a chair of parapsychology endowed by the writer Arthur Koestler and his wife. The Koestlers, who committed suicide together three months ago, left around £400,000 to set up the chair, the first of its kind, at a UK university.

Dr John Belfitt of Edinburgh University's psychology department, who is an executor of the will, said he could not comment on approaches from institutions since they were all tentative at present.

"The will has given us about a year to try to get the chair set up, and I hope that in a few months we will have enough clear proposals and offers to make a decision," he said.

It is thought that many parapsychologists, particularly the Society for Psychical Research in London,

feel the chair should be founded either in or near London.

Dr Belfitt said he was not pessimistic about the chair being established, and said he had been quite surprised by comments in newspapers apparently doubting that the bequest could be carried out. "People have very strong opinions about parapsychology, and whether it is a reputable subject. But there is enough positive enthusiasm to make me hopeful that we will find a proper home."

## Poor rewards of teaching adults

by Felicity Jones

University lecturers are less keen to teach adults in extra-mural departments than they have been in the past according to a report by the Universities Council for Adult and Continuing Education.

Their increased workload and the comparative erosion of the fees for teaching adults are the main factors which had put extra-mural teaching at the bottom of most lecturers' list of priorities, although most academics remained in favour in principle of extra-mural teaching.

In a final report by a working party on the role of the part-time lecturer in adult education which involved four detailed questionnaires of a third of universities, personal reasons for giving up extra-mural teaching ranged from extra departmental responsibilities to family pressures.

A majority of lecturers in most universities do not teach for the adult education department but out of these who had taught adults for the purposes of the survey, 56 per cent had dropped out altogether.

Those who continued to teach adults did so out of a strong sense of responsibility towards adult teaching despite the poor financial return. Fees had

declined, it was noted, from representing an eighth of the full time salary in 1968 to one-fortieth in 1981.

One university chaplain was reported to have said that he found that work as a supply clergyman was better paid than being involved in extra-mural teaching.

The declining number of new young lecturers is also reducing the reservoir of relatively low-paid academics who traditionally tended to do the bulk of extra-mural teaching. Forty six per cent of heads of department thought it was the responsibility of internal staff to teach extra-murally but also it was noted that it was relatively a waste of time for professors to do this work.

The council recommends that universities encourage full time staff to teach adults. It also recommends that universities grant part-time teaching staff more representation on key committees and give full-time lecturers clearer responsibility for part-timers with mini training sessions.

A statistical inquiry to evaluate the "low pay" syndrome which has developed in adult teaching, particularly among full-time university lecturers, is also recommended although the working party has deliberately tried to keep away from financial matters.

## Prompt loan could rescue drama college

A short-term loan from Bexley Council is being explored as one way out of the financial crisis facing Rose Bruford College of Speech and Drama.

The college is wholly financed from the public sector advanced further education pool and its share is channelled through Bexley Council.

But because of national adjustments to the pool allocation, the college faces a £24,000 shortfall between September and March next year and fears that its unique courses for actors and stage technicians may be in danger.

The authority is refusing to accept estimates from the college unless they reflect the shortfall - equivalent to about 14 per cent of the college budget.

Mr Jean Norman Benedetti, the college principal, feels Rose Bruford is caught up in a dispute not of its own making between Bexley and the Department of Education about the £48,000 clawback.

"Like many other institutions the college is the victim of a funding system operating on a mathematical basis with no allowance for any discussion on educational issues," he said.

Although the authority has not officially confirmed it, staff say that Bexley will withhold the college's pool allocation from September if the dispute is not settled.

As the college has no other source of income this would put payment of salaries at risk. The staff are not keen on the possibility of a loan, preferring the future assurances for the college's future financing.

Support for the campaign to safeguard the college and its courses has come not only from Dame Peggy Ashcroft, one of its patrons, but from other leaders in the theatre world including Sir John Gielgud, Miriam Karlin, Sam Wanamaker, and directors from many national and regional theatres.

A past student at the college, actress Barbara Kellerman, last week presented a letter to Mr Sams appealing for the authority not to take a decision which would endanger the college's future.

"I believe its loss would be a very serious one to the theatre," wrote Dame Peggy to the council.

## Centre will help social scientists

A new centre in economic computing is being set up at the London School of Economics to provide a service for social scientists who need to use quantitative analysis to carry out their research.

The centre is headed by the Social Science Research Council which has allocated £786,500 to the project over the next five years, subject to inflation, after which it will be expected to develop a commercial role and become self-supporting.

The project completes a long term review of the economic forecasting and modelling commitments of the council begun in 1980 largely on the initiative of the chairman, Mr Michael Posner. A macro-economic modelling bureau has already been set up at Warwick University to improve the efficiency of models, and an economics consortium of experts first met in 1981 to distribute grants.

The new centre, based in the Lionel Robbins building, will aim to service the computing needs of economists in government, public service, government and universities. A system of charges is being considered, although university academics are likely to be exempt.

The advantages of the LSE are that it already has a strong computing department, and it is located in the London computer network, which has recently upgraded its technology, acquiring two of the most powerful computers on the market, the AMDAHL V800 and the CRAY 1.

Professor Sandy Douglas, professor of computational methods, said there was no doubt more and more social scientists were using survey analysis in their work. The number of undergraduates taking the introductory computing courses has risen from about 30 a year to 300 a year in 12 years.

Dr Brian Cooper, a consultant in statistics and information systems with ICL, has been appointed director of the centre and will take over later this month. It is expected to open in the autumn and more staff may be taken on in addition to the 25 in the LST computing department.



Mehmed Davis, an electrical engineering student at Imperial College, London, tries out the human powered vehicle which will take him and 23 colleagues 3,675 miles around the coast roads of Britain in an attempt to raise £10,000 for the Royal National Lifeboat Institution.

The students hope to raise enough to buy one of the new engines needed for 11 new lifeboats.

They expect the trip to take 10 days and will keep the vehicle moving 24 hours a day by splitting into teams of three. A white and turquoise shell made from Kevlar, which is normally used in helicopter construction, was added to the basic tricycle to make it more conspicuous to normal traffic and more streamlined.

## Brunel plan to enhance technological reputation

by Ngao Crequer

Brunel University's senate has approved a new academic plan aimed at emphasizing its technological base and extending its research links.

In the development plan paper Professor Richard Bishop, the vice-chancellor, says that after extensive debate and changes, Brunel needed time to settle down. "In particular, there are not a few members of the teaching staff who will have their own private adjustments to make - by retrieving the threads of original work, for instance."

He has also appointed a management accountant to exercise "lighter and more aggressive" financial control. The university will have four faculties rather than six schools and four independent departments. The main changes are in the faculty of education and design where the teaching will be given a strong bias towards technology.

In education, it intends to ensure that staff go back to teaching in schools periodically, although there may need to be national negotiations to allow this.

In social sciences, the faculty favours retaining the five disciplines of economics, government, law, psychology and sociology.

## Bureau's basic mood is dogged optimism

The mood of the conference on adult basic education organized by the European Bureau of Adult Education at St Andrew's University last week was one of dogged optimism.

Most delegates felt that although they were unlikely to attract dramatic financial support in the near future, they would win increasing backing in the long term.

Mr Ettore Gelpi, vice chairman of the Committee for Sociology of Education of the International Association of Sociologists, told the conference that in 1990 more than 900 million illiterate people throughout the world would be asking for education.

"We have to fight for a new educational order. It is very important not to identify illiterate people with non-educated people, since you often find illiterate people are much more concerned about the main issues in our

society than educated people," he said. Education was becoming the most relevant part of a person's life, particularly a strong desire for cultural education, but schools and universities were not prepared for this revolution, he added.

A number of questions raised at the conference are to be discussed in individual countries and reports on developments will be made at the world conference on adult education in 1985.

Basic education should be seen as the quality education and not a cheap subsidy for disadvantaged people, it was said, but there was a problem of how to insist on and maintain quality.

Delegates from all countries felt that training programmes for the unemployed were largely to improve unemployment statistics. Mr Pablo Foster, director of the Scottish Adult Basic

## Refugees champion Russian

University Russian studies departments to make by retrieving the beginning of the 1980s, have found an unlikely champion in the form of a coordinating group for East European refugees. The exiles fear that the cuts will threaten study of the "minority" languages of Eastern Europe and the Soviet Union.

The European Liaison Group which was founded in 1969, has hitherto confined its activities to publishing survey papers and holding brief survey conferences on the current state of affairs in Eastern Europe. They have now however begun circulating letters and are planning a major investigation on the state of Russian studies.

Although the majority of ELG council members are from countries where Russian has been traditionally viewed as the language of the oppressor, they all accept that, for young people wishing to study their ancestral culture, Russian will inevitably have to be their working tool.

Except for London University's school of Slavonic and East European studies, most university Russian departments do not offer a complete range of minority language and literature courses, but lecturers who happen to have a personal interest in a given subject have tended to develop it within departments.

One lecturer, Mr James Dingley, of Reading, who has been closely co-operating with the ELG in this matter, stressed that it is not a matter of replacing Russian studies across the board by exotica such as Lithuanian or Georgian. But there is room, he said, for a more flexible approach, with perhaps the supplementing of the traditional Russian "lang and lit" course with more specialized work on regional culture.

Primarily, of course, such work will be done at postgraduate level - but without undergraduate Russian departments, the necessary infrastructure would vanish.

In one respect, Mr Dingley has been more fortunate than some. In his own specialty, Byelorussian - the language of third largest ethnic group in the Soviet Union - private research facilities do exist - the Francis Skaryna library in Finchley is acknowledged to own the most comprehensive collection of Byelorussian books and manuscripts outside the Soviet Union.

Valuable as this collection is, the burgeoning of Byelorussian studies in this country in the last 20 years would not have been possible, had not a few keen research students in the 1960s, including Arnold Macmillan, Peter Mayo, Shirin Akiner and Mr Dingley himself found it possible to pursue their special interests within the structure of a regular Russian course.

## Travel aids

The company Charles Letts has instituted two student travel awards at Lancaster University's department of marketing, to commemorate the millionth sale in their Study Aids series.

The department was responsible for the research preceding the launch of the series. The scholarships are worth £250 each and are open to all undergraduate major students completing their second year of marketing studies.

Education Unit, said: "Basic adult education acts as a kind of recruitment to win people back into education. One question is how we gain legislative support for adult basic education such as there is in Sweden. The Government will recognize that it can release an enormous amount of productive energy if it spends money on helping people learn."

In Sweden, 80 per cent of adults were involved in adult education, said Ms Kirsten Modée, an adult education teacher, and there was a legal right to paid educational leave.

A current problem was to offer literacy courses to immigrants, since frequently they had become literate in their own language before they could benefit from these and courses were limited though lack of funds.



# Iranian universities reopen

by Dilip Hiro

Many Iranian universities and colleges of higher education are reopening after three years of inactivity caused by the cultural revolution.

This applies however, only to the faculties of physical sciences, engineering, technology and medicine. The faculties of social sciences and humanities remain closed.

In Greater Tehran, twelve out of the five universities and 11 colleges are now partially open. But the reopened institutions have little in common with their recent past. The student body is much reduced and both the curricula and the physical appearance of the institutions are changed.

The reopened universities are not accepting fresh students, only readmitting the old ones. Of these not many are still around. Those who had anything to do with the secular or Islamic left (Fedayeen, Tudeh and Mujahideen) were either arrested, executed or driven underground.

Of those supporting the Islamic regime, many are in the military and the revolutionary guard corps and some in the civil service and the "Reconstruction Crusade".

As a result there are only about 4,500-5,000 students at Tehran University. The figure before the revolution was 17,000-18,000.

Three years ago the walls of Tehran University campus - a hotbed of secular and Islamic leftists - were covered with hundreds of hastily scrawled left-wing slogans. Today, the same walls carry well-painted slogans chosen from an official list.

This is one of the achievements of the University Crusade, which was launched in the wake of the appointment of the seven-member Cultural Revolution Committee (CRC) by Ayatollah Khomeini in June 1980.

The CRC, composed of clergy and scholarly laymen, has tried to achieve the twin objective of ending cultural imperialism, whether of Eastern or Western variety, and imbuing universi-



Iranian students occupied the United States Embassy in Tehran at the height of the revolution and held the staff hostage.

ties with Islamic values. It has redesigned curricula: sponsored new textbooks, or modified the existing ones in the light of Islamic teachings; helped the teaching staff to gain better understanding of Islam; and replaced Western concepts in education with Islamic ones.

The clergy have been active at different levels in helping the CRC to realize its aims. For instance, they are deeply involved in the running of the Centre for Textbooks set up by the committee. So far this centre has produced 3,000 textbooks, either original or in translation.

Most of these are on pure sciences, medicine and engineering: the disciplines where conflict between the pub-

lished knowledge and Islamic tenets is minimal.

What has proved daunting has been the programme of producing textbooks in social sciences - economics, psychology, sociology, political science, anthropology - that are imbued with Islamic perspective and values.

The other major problem facing the CRC is the shortage of teaching staff with acceptable Islamic credentials.

Despite these difficulties, the Islamic regime is intent on ending the distinction that now exists between universities and theological schools. Khomeini has called for the merger of Tehran University and Fazelabab, the leading theological college in Qom, to produce a new leadership for Iran.

## Australian v-c calls for tripartite system

from Geoff Maslen

MELBOURNE

The head of Australia's largest university has called for radical reforms to the nation's higher education system.

Professor Michael Birt, vice-chancellor of the University of New South Wales, has called for a restructuring of tertiary education that would create a tripartite system. This would consist of vocational colleges to provide for technical and specific job training; arts and science colleges that would offer a general education in the humanities, social sciences and natural sciences; and universities which would deal with the learned professions and vocations.

Professor Birt's proposal incorporates elements of Australia's present form of post-secondary education which has technical and further education colleges, colleges of advanced education and universities.

But under the Birt scheme, the roles and responsibilities of the three types of institution would be markedly altered. The vocational colleges, for example, would take over some of the present duties of the advanced education colleges by training specialists for service in particular vocations on graduation.

According to Professor Birt, a close partnership would have to be developed between private and public employers and the vocational colleges. Firms would be encouraged to contribute to and participate in programmes designed to upgrade workers' skills.

The arts and science colleges, meanwhile, would offer courses designed "to serve the social function of providing a generally well-informed and well-educated service sector". They would help society to ensure that the well-educated and the well-informed of social, political, scientific and cultural thought were maintained in good health, Professor Birt says.

These colleges would meet two other needs: the provision of courses for the personal enrichment of mature age students, and bridging courses for those wishing to go on to university. Essentially, Professor Birt says, the arts and science colleges would offer a tertiary-level, broad and general education.

Universities, as the third strand in the Birt proposal, would provide intensive courses in the basic humanities, social sciences and sciences. Students in these fields would be those intending to enter academic employment, research or scholarly activity after graduation.

Professor Birt argues that if universities were to develop in this way, they would place more emphasis than at present on postgraduate training and research in all fields. They would also ensure the continued availability of scholars of high calibre.

The result of implementing these proposals, says Professor Birt, would be that universities would probably become smaller and the present number might also be reduced.

He says that some colleges of advanced education could develop similar roles too and become universities in the new sense of the word. Others would have a bridging role, and if this occurred, Australia would move closer to an American pattern. Those who entered the learned professions might first complete a broad, general degree in the humanities and science before entering on more specialized and concentrated training for particular professions.

Groupings that provided for both staff and student movement between various kinds of tertiary education would greatly improve access to all levels of higher education, Professor Birt says. They might also enable a way to be found around the difficulties which students experience in attempting to move from one institution to another.

## Canadian social science council 'in a mess'

from Mark Gerson

MONTREAL

Canada's Social Sciences and Humanities Research Council has been urged to drop restrictive, bureaucratic and rigid practices that "are not always compatible with the research process".

A report commissioned by the Social Science Federation of Canada, and released during last month's learned societies conference in Vancouver, complained of the council's time delays and complicated procedures which aggravated the chronic underfunding of social science research.

According to Donald J. Daly, a professor of administrative studies at York University, and a member of the task force that prepared the report, even a limited budget administered by the council could be managed more efficiently and effectively. "The social sciences and humanities research council is an administrative mess," he said.

But John Baglow, a research officer with the council said: "If we are in a mess it is because we are trying to respond to the conflicting demands of the academic community. I think we are inadequately responsive and a model of openness."

Baglow denied that delays were extreme given the complex review system set up at academics' request. The council must also be accountable in the way it spent taxpayers' money, he said, and that could be a time-consuming process.

While Baglow acknowledged that there were some problems, he insisted that high-profile criticism damaged the council's credibility with the government. "Our case for funding is weakened when the constituency we are supposed to be serving says loudly that we are not doing a good job. The Social Science Federation don't have to make a big deal of noise to get us to listen," he said.

The task force report, now under study by research council officials, also

calls on the government to increase its funding of basic research in the humanities and social sciences. According to Daly, however, the government is likely to continue stressing "strategic" research at the expense of independent research.

Criticism of Canada's research climate were aired throughout the two-week learned societies conference, which brought more than 5,000 academics from some 70 scholarly associations to the University of British Columbia in June.

Members of the Administrative Sciences Association of Canada pointed to the concerns of the task force report when they complained of intricate application forms and their little relation to the requirements of management research. Eighteen copies of the grant application must be forwarded to the council so far in advance that much of their requested information is not yet available, said business school faculty and deans. By the time the

applications were approved six months later, the project was outdated, they added.

At its annual meeting, the Canadian Federation of Humanities worried that the annual conference of Canada's learned societies was itself threatened by the Social Sciences and Humanities Research Council. The federation believes that a counter-proposal forcing individual associations to compete for administrative support grants could destroy some of the smaller associations and prevent others from attending one of the few conferences that is able to bring Canada's disparate scholars together.

If implemented unchanged, the competitive scheme would require learned societies to apply by December for 1984/85 support grants. According to the federation, the council's March 1984 response date would allow them little time to plan their participation in next June's conference.

## Graduates escape brunt of recession

from John Walsh

DUBLIN

Eire's dramatically spiralling unemployment rate has not hit graduates as badly as other young people, a major survey has revealed.

The survey traces the career patterns of 91 per cent of some 4,638 people who obtained primary degrees from the universities or from the National Council for Educational Awards. It puts their unemployment rate at 7.4 per cent at the end of January this year - about 4 per cent lower than for the workforce as a whole.

Just over 40 per cent of the primary degree graduates obtained jobs and exactly half were pursuing further study or training. Emigration was still at a very low level - 8.1 per cent and this figure included foreign students who had come to Ireland to study and then returned home.

Some study areas were particularly badly hit like architecture and agriculture, reflecting the difficulties in the building and farming industries.

The much hoped-for upsurge in engineering jobs did not materialize as 12.6 per cent of engineering graduates were still jobless at the end of January. Many of these were civil engineers affected by cutbacks in public spending.

Industrial policy-makers still insist that the booming electronics sector will provide more jobs for engineering graduates. The only area with a 100 per cent success rate was veterinary medicine.

The survey also examined the career patterns of those primary degree graduates who had remained in university to take the one year higher diploma in education.

It has long been recognized that too many stay on at this teaching course. Of the 1,296 taking the diploma last year only a quarter got permanent teaching posts in Ireland and a further 30.8 got part-time, temporary or substitute teaching. The position is likely to be much worse this year because of the government decision to raise the pupil teacher ratio in secondary schools to save money.

The composite survey was carried out by the Higher Education Authority. It admits that among those primary degree holders listed as working are quite a number in temporary employment undertaking work below what they normally might have hoped for.

The careers officer at University College, Dublin Dr Derek Schofield went further in his comments. He sees a substantial growth in new types of "employment" - temporary in nature and heavily subsidized.

He fears that society is encouraging in all sectors of the economy a movement towards a cadre of staff, as small in number as can be achieved, who are permanent and pensionable. They will run an operation supported by a floating and ever changing group of younger people who will become disillusioned and dissatisfied if they are asked to move on.

The AAUP cited violations of academic freedom and tenure procedure at the institutions. The University of Idaho dismissed 17 professors, declaring financial exigency as an excuse.

## Universities 'mismanage' the books

from David Dickson

PARIS

A sharp attack on the lax accounting methods of many French universities was published in Paris last week by the Court of Accounts, a government office responsible for keeping track of the way public money is spent.

In a report presented to the French parliament and the president of the republic, the court lists examples of universities that have run up substantial debts, often without fully informing their faculty members or the government; of full-time staff receiving lucrative employment outside the university; and of senior administrative officials living in excessively subsidized accommodation.

Equally harsh criticism is made of the Centre National de la Recherche Scientifique (CNRS), the principal source of support for basic research in France, which employs over 8,000 scientists. Here the court found cases of individuals still receiving a salary despite not having published any research results for a number of years.

laboratories where the working hours were significantly less than the standard 39-hour week set by the CNRS director; and a wide variation in the bonuses awarded to research workers for producing patentable research.

Unlike some government reports which tend to draw a veil of discretion over detailed errors, the members of the Court of Accounts, almost all of whom are graduates of the prestigious Ecole Normale d'Administration, have little hesitation in producing specific examples of university or scientific mismanagement to back up their claims.

In the case of the Paris-IV (Val-de-Marne) for example, the court claims that the university owes its suppliers at more than 15 million francs (£1.3m) at the end of 1981. However, it says: "The members of the council of the university, held in ignorance about the exact size of the university's debts, voted in 1979 and 1980 to approve budgets which were not in proper equilibrium."

The court points out that the then president of the university had deliberately reduced by a factor of ten the estimate made by the university's financial services of the amount of money owed by its different departments.

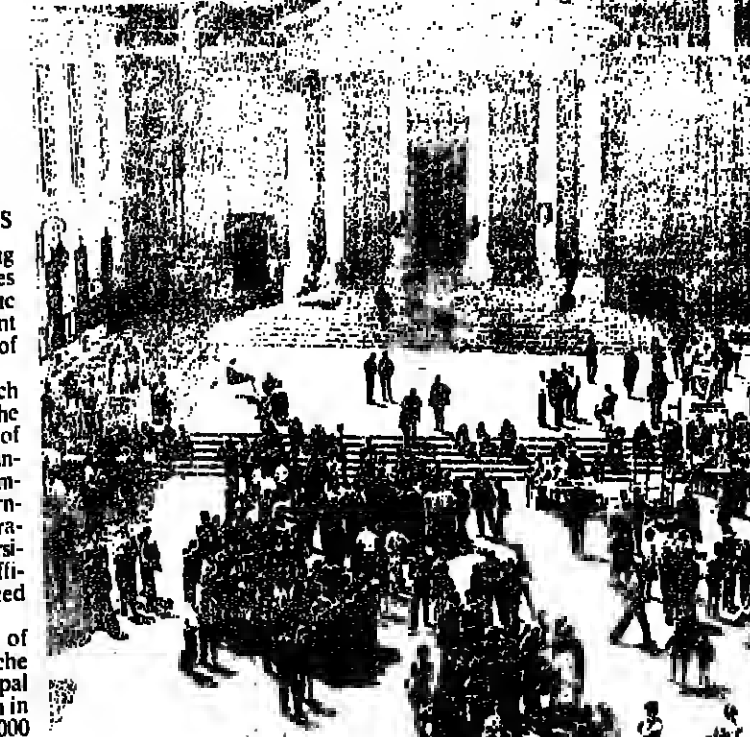
Similar irregularities were revealed at the Sorbonne (Paris-IV). Here the court found that at the end of last year the university had debts totalling 10 million francs (£870,000). In addition, a further 7.8 million francs was owed, resulting from what the court describes as an "unfortunate property operation".

In general, the court claims that the annual balance sheets produced by universities "sometimes contain surpluses and holdings when subsequent or in bank accounts the existence of substantial debts often carried over from one year to the next."

The court is no less impressed with the way that universities keep track of the outside activities of their staff members, citing several examples of university teachers holding several paid positions simultaneously.

It quotes the example of six full-time teachers at one higher education institution who also appeared, on the level of the salaries they were receiving, to be full-time employees of an outside private company. Under French law, university teachers are prohibited from taking on paid work which is not related to teaching.

In the case of the CNRS, the Court of Accounts lists several instances in which the agency seems to have been



Sorbonne: has run up substantial debts

excessively tolerant of the low productivity of some of its scientists. The court quotes the case of a biologist who had not sent in any report on his activities since 1967; a physicist who claimed to have been on a "research strike" since 1969 and against whom no action was taken until 1981; a thesis in geology which had taken 18 years to complete; and a research worker in medieval history who had still not completed his thesis, even though he was five years from retirement.

Other examples of lax management included a research scientist who only came into his laboratory on Monday mornings and two other scientists who continued to be paid by the CNRS even though they had disappeared from their laboratory for several months.

The government has already responded to the court's charges. In the case of universities, the ministry of national education, M. Alain Savary, has accepted the existence of what he describes as the "unhealthy practices" identified by the court.

In the case of university staff taking on outside jobs, Savary has said that the situation will be clarified by new rules being drawn up by the ministry. These will contain a new definition of the obligations of teachers.

and offered the teachers, most of them tenured, little more than a month's notice.

Auburn University was censured for dismissing a female professor employed there for 12 years, which the AAUP judged unfair in light of a male colleague in a similar situation who was retained.

Sonoma State University, which also declared a financial emergency, was criticized for dismissing 24 professors without proving that a fiscal crisis did exist.

The American International College

was censured for failing to consider a professor for permanent appointment after retaining him on a yearly contract for 13 years.

Morehead State University failed to reappoint two professors after they filed grievances against the administration. Goucher College dismissed a tenured professor on the grounds of an unproven financial emergency.

The City University of New York, Arizona State University and Georgia's Armstrong State College were removed from the censure list.

A constituent conference of the Association of Soviet Sinologists has been held in Moscow. Under its charter the organization will promote scientific and propaganda activities in the field of sinology and strengthen organizational ties between Soviet sinologists.

While draft registration is required of young men in the United States, there is no draft at present.

Check on Chinese

A constituent conference of the Association of Soviet Sinologists has been held in Moscow. Under its charter the organization will promote scientific and propaganda activities in the field of sinology and strengthen organizational ties between Soviet sinologists.

While draft registration is required of young men in the United States, there is no draft at present.

Check on Chinese

A constituent conference of the Association of Soviet Sinologists has been held in Moscow. Under its charter the organization will promote scientific and propaganda activities in the field of sinology and strengthen organizational ties between Soviet sinologists.

While draft registration is required of young men in the United States, there is no draft at present.

## About-turn on draft ruling

from E. Patrick McQuinn

WASHINGTON

In a surprising and somewhat confusing gesture, the United States Supreme Court last week set aside a lower court ruling that had forbidden the Department of Education from requiring male financial aid candidates to prove they had registered for the military draft.

The Supreme Court reinstated the requirement at the request of the White House. The ruling, which came without any recorded dissent among the judicial panel, means that the Department's mandate could remain in effect well into the first half of next year because of complicated and lengthy appellate procedures.

The high court will have its summer recess until October, when it will officially decide if it will consider the case. While it is highly likely that the court will eventually pass judgment on the constitutionality of the department's order, the requirement will remain law until then.

On June 17 a federal district court in Minnesota determined that the order was unconstitutional and could not be enforced. Judge Donald Alton instructed the Department of Education to notify American financial aid counselors at colleges and universities throughout the country by the end of June that students need not disclose their selective service status when applying for government funds. The Supreme Court's "agreement" means male students must immediately begin signing statements that they have registered for the draft.

Financial aid administrators generally agree that the court upset will "wreak havoc" and cause chaos for students and financial managers.

Equally surprising was the Supreme Court's ruling upholding a law - also from Minnesota - granting parents a tax deduction for the cost of private elementary and secondary education. The court rejected arguments from the American Civil Liberties Union that such a law amounted to government sponsorship of religious institutions, which is not permitted by a constitutional amendment.

The Minnesota law allows parents to deduct \$700 (\$470) per child for the cost of private schooling when determining their state taxes. At the federal level President Reagan is pushing his own plan to grant parents a tax credit covering half the cost of private education, up to a maximum ceiling of \$300 (\$200) by 1985. The court ruling made no mention of Mr. Reagan's proposal but the White House hailed it as supporting evidence in its case.

Mr. Reagan's solicitor-general, Mr. Rex Lee, said the court "establishes a new beachhead, and we're grateful for that". Many members of the Congress who favour the idea of tuition tax credits have not been convinced by Mr. Reagan's efforts because they thought likely the court would intervene and declare the measure unconstitutional.

While directly unrelated to Mr. Reagan's plans, the ruling could shift support among legislators when it comes to a final vote.

In the financial aid case, attorneys opposing the department of education had argued that the ruling would force students protesting the measure to incriminate themselves, which is prohibited by the constitution.

Mr. Lee, in statements to the court on the president's behalf, called the argument "sheer sophistry" and said that the law sought only to encourage draft registration. The point of the law, he said, was not to punish students who had failed to register. "Students retain the option to furnish no information whatever to the government," he explained.

While draft registration is required of young men in the United States, there is no draft at present.

Check on Chinese

A constituent conference of the Association of Soviet Sinologists has been held in Moscow. Under its charter the organization will promote scientific and propaganda activities in the field of sinology and strengthen organizational ties between Soviet sinologists.

While draft registration is required of young men in the United States, there is no draft at present.

Check on Chinese

A constituent conference of the Association of Soviet Sinologists has been held in Moscow. Under its charter the organization will promote scientific and propaganda activities in the field of sinology and strengthen organizational ties between Soviet sinologists.

While draft registration is required of young men in the United States, there is no draft at present.

Check on Chinese

A constituent conference of the Association of Soviet Sinologists has been held in Moscow. Under its charter the organization will promote scientific and propaganda activities in the field of sinology and strengthen organizational ties between Soviet sinologists.

While draft registration is required of young men in the United States, there is no draft at present.

## Transcripts add colour to story of Mississippi riots

from E. Patric McQuaid

WASHINGTON

Some grim reminders of the racial tensions that have plagued the American south are emerging some 20 years after the first black student enrolled at the University of Mississippi.

The John F. Kennedy Library in Boston has released the first in a series of audio tapes and transcripts of conversations the former president secretly recorded. The most dramatic concern the circumstances surrounding the Mississippi events, including his order to send in military troops and his discussion of the prospects of placing the state governor under arrest.

In Oxford, at the University of Mississippi black and white students are once again exchanging racial epithets and threatening escalated violence this time over the school's tradition of waving the Confederate flag at athletic events.

Mr. Kennedy began taping his conversations in July 1962 after his military advisers denied guiding him wrongly on the danterine invasion of Cuba a year earlier. They cover the final 16 months of his presidency to November 1963 when he was assassinated.

The library, one of seven presidential archives established by Congress, has so far released only 12 hours of tape, representing 5 per cent of the 200 hours it holds.

The conversations regarding the Mississippi place on September 30 and October 1, 1962. A court ruling had ordered the university to register Mr. James Meredith, a black the school had turned away. Bloody rioting had broken out at the Oxford campus and the governor, Mr. Ross Barnett, tried vainly to force JFK into removing Mr. Meredith.

"I'll go up there myself," said Governor Barnett, "and I'll get a microphone and tell 'em that, uh, you have agreed for (him) to be removed."

"No, no. Now wait a minute," replied the president. "How can I remove him, governor, when there's a riot in the street and he may

step out of that building and something happen to him."

The president ordered in 3,000 soldiers under the command of General Creighton Abrams, who would later direct the US forces in Vietnam. In another tape, the president's late brother, then Attorney General Robert F. Kennedy, is furious with General Abrams for not moving the troops into Oxford fast enough to stave further eruption.

For nearly two decades since then the University of Mississippi - known as Ole Miss - has been considered a model of racial harmony. But two months ago tensions flared over ceremonies and other material traditions at the university which blacks say serve as an embarrassing reminder of the Confederacy, slavery, and injustice.

Many of the 746 blacks among the school's 9,412 students participated in a sit-in to object about the waving of the Confederate flag - which is incorporated in the Mississippi state flag - at football games and other sporting events. About 1,000 angry whites staged a counter demonstration outside an all-black fraternity.

The campus chancellor, Mr. Porter Fortune, put a stop to the university's tradition of distributing miniature rebel flags to students before games, but blacks say the measure was far short of their demand that he ban the flag entirely. They have since demanded that the university abolish its mascot - a dog dressed as a southern colonel with grey tail-coat and a white gaiter - and the school song Dixie.

In a lengthy reply, Mr. Fortune said he was addressing one major concern of black students - recruitment and retention of black teaching staff - but rejected the others, which included a separate budget for black cultural events and increased financial aid specifically for blacks.

At present only six of the university's 514 lecturers are black. The chancellor said he aimed to increase the number of black teaching staff to 21 by 1986.

## Government to enforce race law

The Reagan government is not going to appeal against federal court orders telling the department of education to take steps against the college and university systems of nine states which have failed to meet a desegregation agenda outlined in 1978.

The administration had retained its option to challenge the ruling, which required the department to collect evidence from each state by the end of June and begin enforcement measures - such as suspending federal allocations - against defiant systems by mid-September.

Two of the affected states, Texas and Kentucky, have meanwhile complied and the department's office for civil rights has approved their desegregation plans. The education secretary, Mr. Terrell Bell, said he believed that the

deadlines imposed by the court could be met and he saw no need to file an appeal.

The court also ruled that the department must evaluate each state's progress on desegregation plans during next year.

Minority plaintiffs, responsible for the court order, are not entirely pleased with the blueprint the department has approved for Texas and Kentucky. Texas submitted a five-year plan covering its 105 public institutions, including its two traditionally black universities - Texas Southern and Prairie View A and M.

The Texas governor, Mr. Mark White, has pledged to seek increased funding to improve material facilities, salaries for teaching staff and financial aid for students. The legislature recently approved a two-year budget of

\$30.4m specifically for those projects. The state's traditionally white senior institutions will attempt to enrol 2,432 black and 3,190 hispanic undergraduates by 1987, according to the plan. Whites comprise some 66 per cent of the 172,000 secondary school graduates in Texas but account for 70 per cent of the first year college population.

Hispanic groups contend that the plan lacks specific direction and fails to adequately identify where future funds will come from.

The plan for Kentucky includes public medical, dental and law schools setting aside up to 3 per cent of their entry for graduates of the predominantly black Kentucky State University.

Other states affected by the court order are Arkansas, Florida, Georgia, North Carolina, Oklahoma, Pennsylvania and Virginia.

## Making gradual steps in a white world

from P. E. Burke

OKLAHOMA

More than one in ten students at the University of Alabama are black. They now total more than 1,300, whereas exactly 20 years ago only two black students were enrolled - with the protection of military forces commanded by President John F. Kennedy.

It was on June 11, 1963 that the Alabama governor George C. Wallace stood with his arms folded at the front door of the University of Alabama. In folksy idiom he promised to "stand in the schoolhouse door" in order to ensure "segregation, today, segregation tomorrow, segregation for ever".

For its first 125 years the University of Alabama had been exclusively white. In 1956 the first black student, Authurine Lucy, tried to enrol, but faced with staff hostility and student riots she was there for only three days. Then the school trustees "expelled her for her own protection".

Seven years later, in the spring of 1963, a federal judge in Birmingham, Alabama, ruled that a college applicant could not be rejected on grounds of race. Following that, US attorney general Nicholas Katzenbach, of Pres-

ident Kennedy's cabinet, tried to enrol two black students, Vivian Malone and Jimmy Hood.

They were met at "the schoolhouse door" by Governor Wallace, backed up by armed members of the state's National Guard. Mr. Katzenbach tried to read an official order to desegregate the school. He was interrupted by Governor Wallace, who said: "I proclaim and forbid this illegal act."

Mr. Katzenbach reported to President Kennedy and within hours the 17,000-strong Alabama National Guard had been made a federal force and removed from the command of Governor Wallace. The governor was cited for "unlawful obstructions of justice".





On the home straight: Steve Cram on a training run along Huddersfield's Wall

## On course for success

Probably Britain's best-known undergraduate, Steve Cram is waiting anxiously as any of his less famous counterparts for the results of his final. Although no stranger to tension as a veteran (albeit a young one) of numerous finals of a different sort in athletics arenas all around the world, the climax of his sport studies degree, run jointly by Newcastle and Sunderland polytechnics, has still been gruelling.

As a likable, thoughtful and naturally modest young man, Cram has been a popular figure at the polytechnics. And, perhaps slightly to his own surprise, he has revelled in the life of a student. Anonymity was never a possibility for a sports hero in a region which reserves a rare degree of adulation for its stars, but he has been allowed to behave as the ordinary student everyone knows he is not.

"It's been a great place to escape from the attention I get outside," he says. "I can't walk down the street in Newcastle without being stopped every few yards but in the poly I have only been asked for two autographs in three years, which is great."

Despite initial doubts about going on to higher education, Cram has taken his course extremely seriously and deliberately asked for favours. Because athletics is a summer sport, he has not needed long periods of time off. Although he missed the first fortnight of his final year through the Commonwealth Games where he won the gold medal in the 1,500 metres, he was conscientious about making up the lost time.

"The only thing I dicked out of was a skiing field trip in the second year. I really wanted to go, which was the ironic thing about it, but you have to be sensible about things. Given my luck with injuries, I would probably have broken my leg," he says. "But I have done all the other things - trampolining, canoeing, squash - even though it has meant missing up my training for two or three days sometimes."

He admits he did not know what to expect from the course and had some misgivings about joining, but he is enthusiastic about the outcome. "I didn't expect to learn that much about myself as a person, but I do have a different outlook about lots of things now. For example, I always thought of sport as a fun thing and not something that people took seriously, apart from people like myself."

"I didn't consider it an area which could be studied specifically and I never realized how important it was to people as a whole. It's going to become more important, too, because of increased leisure time and there are bound to be a lot more courses like this one."

Cram was running in world-class races throughout his time in the sixth form and was given allowance for this as "an exceptional entrant" to the course. Although he had only one A level, his nine O levels (including four grade As) were taken as sufficient



Indication of academic potential.

The course head, Mr George Wilkinson, says the decision has been amply justified: "He has the potential to be of quite a high standard academically. He regularly hits around the 60s for his assignments despite all the training he is doing. When he came he was a bit shy, not very forthcoming, but we have seen him emerge as a young man with assurance and confidence."

Not surprisingly, he has also been good news for the course itself, which had only been running for one year when he joined. This year there were more than 1,000 applicants despite the fact that the Council for National Academic Awards has yet to give it Honours status. "There is no doubt about it: having Steve Cram on your course does add to the prestige of your course," Mr Wilkinson admits.

Nor is he the only outstanding performer on the course. Three colleagues were included in the British team to the World University Games and many others are prominent in a range of different sports. Although applicants are not required to be outstanding performers, roughly half of those admitted are involved in high-class elite sport at least.

Cram was keen to participate in the Edmonton games himself, having represented the British polytechnics in the past, but was forced to withdraw when a sprained ankle became the last in a string of nagging injuries which have dogged his preparations for next month's World Championships in Helsinki.

He is resigned to running below his best here - assuming he makes the team - because of the amount of training time lost already, so the athletics world may have to wait until next year for him to meet on genuinely equal terms with Steve Ovett and that even more famous postgraduate, Sebastian Coe.

Coe it was who advised Cram when he was considering higher education initially. His own university, Loughborough, was on obvious option for Cram because of the colleges' great sporting traditions, not to mention their facilities. Staff there were used to funding international sports stars and Cram himself had been well satisfied. Cram visited the university and was intrigued but was upset by some premature publicity and decided against applying.

American universities, too, were queuing up to offer places to a rising

## John O'Leary talks to athletics star Steve Cram about the pressures of sport and study

star of the track. "Obviously, they had very good facilities but they make a lot of demand on you. They concentrate much more on you as an athlete and they want you to run for them in the big meetings, rather than letting you work out your own programme, he says."

Cram does not regret his choice, which was made both because of the polytechnics' location and because of the course itself. He explains: "People told me I should leave home but it was different for me since I had spent so much time away. I enjoy being at home now. My fiancée is here and my coach; I could fit my training in and I didn't need to miss lectures."

Staff at Newcastle have made no attempt to interfere with his training programme, although advice has always been available when sought. Cram says: "I haven't actually changed my training as a result of anything, but I have learned on the course but it has still helped in lots of ways. I can concentrate on my training better and the physiology especially has helped - training is bound to be better if you know why you are doing things. Psychology, too, has helped in explaining bad performances sometimes."

The course has also included elements of sociology, the strategy of sport and a section known as provision, which is angled towards those aiming at recreation management or a career. Cram himself was thinking of following the North East's other athletics idol, Brendan Foster, on this route but had second thoughts after a spell with Foster's own municipal department in Gateshead. The brief experience of local government has not left him impressed with the sector as a working environment, although he has had next

to say, he is undecided and he may follow Coe on to postgraduate course eventually. For the moment, however, everything is subordinated to his main ambition: an Olympic gold medal next year in Los Angeles. "Whatever I do, I will have to be on the basis of guaranteed time off for training and I wouldn't want to be sitting behind a desk pretending I was doing a job."

Unlike most of his colleagues on the course, his employment prospects hardly hang on his degree classification. But he would be as disappointed as any of them if he did not do himself justice after three years' hard work. His BA might have to concede pride of place to an Olympic gold, but Steve Cram has been no token student.

## When the listing is the achievement

Brian Morton reports on the *Nineteenth Century Short Title Catalogue*

If it is in the nature of all cultures that they record their own proceedings and creations, then "culture" underwent a Copernican revolution or quantum shift with the development of an available type. The library has since become the emblem of all we understand of past cultures and yet libraries, a full generation into the era of computer technology, have begun to seem anachronistic, confused, obsessively ordered redundancies.

The obituaries have been premature, of course; books and libraries will survive and still exercise a powerful grip on the imagination. Contemporary fiction writers - Borges, Stanislaw Lem, Richard Brautigan, Italo Calvino - attest to our obsession with our stored past of cultural information; in Alvin Kernan's words, we inhabit an "imaginary library", an organic body of information that stretches back continuously to Gutenberg and Caxton, and patchily beyond.

If it is characteristic of imperial cultures that self-scrutiny and self-recording becomes obsessive - Nietzsche, Leyden, Agra, Bologna - then Britain bears all the signatures of her imperial past. The recording of British printed books is by now much further advanced than that of any other Western European literature, and rivaling Soviet and American efforts. The original *Short Title Catalogue*, produced by Pollard and Redgrave in the 1920s, covered printed books from Caxton to the 1640s. STC's success, a solo effort by the redoubtable Donald Wing, now revised, covered the remainder of the seventeenth century, a boom period in book production. Inevitably, that upward incline steepened dramatically with the passage of time. An international project, centred on the British Library and with Australian and German support, has been in progress for some time, to produce a catalogue of eighteenth century books; a machine-readable file of British Library eighteenth century holdings is already available.

May 20 saw the formal launch of the latest and most ambitious of these projects, the *Nineteenth Century Short Title Catalogue*. Financed over its early stages by the Newcastle-upon-Tyne textile chemist, George Miller, work has begun on the first volume which will yield listings up to 1815. The chairman of the venture is Bodley Librarian at the University of Oxford, John Jolliffe, who heads a 10-strong academic and executive committee.

The new catalogue will provide a single coherent union author catalogue based on holdings in the six copyright libraries: the British Library, the Bodleian, the National Libraries of Scotland and Wales, Cambridge University Library and that of Trinity College, Dublin. In addition, there will be separate listings by subject and place of origin of all books from the British Isles, colonies and dependencies past and present, including the United States; together with all translations, whatever the place of imprint.

John Jolliffe is clear about the value of the new project. "All the previous *Short Title Catalogues* filled a gap for researchers by providing a complete list of publications within the relevant period. Previously, they had to rely on isolated material and the listings of individual libraries, where these were available."

Another member of the academic committee, Professor Henry Dickinson of the University of Edinburgh's department of history, underlines the research value of the NSCT. "Details of the history of literature, law, economics, journalism, philosophy, medicine, religion and science. The project, begun in a period of diminished hope and opportunity, unites academics from Oxford, Loughborough, Edinburgh, Newcastle and elsewhere in common cause; unites a variety of sometimes inimical disciplines; and, crucially, unites the education sector and private industry."

Only the geography of past knowledge reveals the history of a culture, illuminates its present and helps map its future.



Collaboration between higher education and industry is a Good Thing. The message was heard loud and clear throughout the present Government's first term. And since the desirability of closer ties between producers of good and knowledge seems to command general assent, slow progress must be due to some unidentified problem frustrating good intentions. This, at any rate, is the reasoning enshrined in the terms of reference of the working group set up last year at the Prime Minister's request: to examine current arrangements for academic-industrial cooperation; to assess their effectiveness; and "to examine any institutional, administrative, financial or other barriers and disincentives to the formation, progress and extension of links and the scope for their dismantling."

The working group, set up by the Advisory Council for Applied Research and Development and the Advisory Board for the Research Councils, published its report last week. It is optimistic about future prospects for commercial exploitation of academic ideas. It estimates that higher education institutions took £40m worth of industrial contracts last year, compared with £20m in 1978, and the group hopes that with enough encouragement this can be boosted to £100m within five years. It looks to the Government to provide this with two new funds, one to ice the cake for institutions who win outside contracts - who would get a 25 per cent bonus payment from the Exchequer - and one to help others drum up business.

The two funds together would rise from £15m a year initially to £30m in five years. The idea is to reward success, "a basic principle in business and war", according to Mr J. R. S. Morris of Brown and Root, a member of the group.

And the problems? They exist, but they are not insuperable, the report finds. "We do not believe scholarship and utility are mutually exclusive," said the group's chairman, Sir Alan Muir Wood, last week. Lack of communication, inflexible job descriptions, fears about commercial confidentiality blocking publication and reluctance to take risks in new kinds of work can all be overcome if the attitudes towards industrial research are changing in higher education, and cities examples of successful ventures which have dealt with all these problems. It singles out a number of measures

which should make life easier for the eager academics. These include more flexibility in appointments, so that teachers can do less research and researchers less teaching - a similar view is proposed for the evolution of different institutions, so that everyone does fewer things concentrating on doing fewer things better. And the report calls for more untempered appointments, with higher pay to compensate for lack of job security, and for changes to make it easier for academics to work part time outside their institutions.

Universities should also make more use of research committees to plan coherent programmes in institutions, the report suggests. This suggestion is taken from last year's Morrison report and the ACARD group echoes Morrison's concern about the dual support system, in which university research is theoretically paid for by the UGC, but funding basic facilities and other bodies providing cash for individual projects. Muir-Wood's group call for earmarking of UGC funds for research, the amounts to be agreed individually with each university.

The group was also concerned about polytechnic research, declaring that "over-detailed control by local authorities and the lack of central provision for research support inhibit industry-polytechnic interactions." Again, the report calls for more flexibility, to be achieved through a clearer Department of Education and Science definition.

Every university and polytechnic is surrounded by a shoal of small manufacturing firms who might benefit from applied research expertise. Yet academics often develop their work in blissful ignorance of its potential utility. If GEC or Unilever are the main local employers, the researcher naturally thinks of their interests when a new idea comes up. In any case, a technology-based firm this size probably employed research chairs in its own right. But the big fish look after themselves, how does a small academic unit happily working on, say, the chemistry of surface coatings discover that their new process is an answer to the prayers of the widget-maker 20 miles out of town who is losing customers because of chronic corrosion problems?

The Science and Engineering Research Council thinks the academics should be told. And this is the main purpose of its regional brokers' scheme, which has now been running experimentally for a couple of years in four different regions. The report by the Advisory Council for Applied Research and Development suggests that this scheme should be extended, with Department of Industry support, to cover the whole country.

Dr Stephen Bragg, a member of the ACARD study group, is the SERC broker for Cambridge, covering an area which takes in eight universities and polytechnics from Leicester to Hatfield. His experience of the job, visiting manufacturers across the whole spectrum of engineering ambition and technological sophistication, suggests that the peripatetic broker could become a useful fixture on the academic-industrial scene.

He is convinced that the active search for industrial problems leads to new links between the two communities which would not arise any other way. "For instance, there was a firm which needed to heat flour very rapidly during processing to make pig feed," he said. The firm was interested in using fluidized bed combustion - in which small particles of solid fuel burn

Jon Turney concludes his series on the growing association between higher education and industry

## In search of the missing links...

which should make life easier for the eager academics.

Other changes proposed by ACARD affect agencies outside higher education institutions (HEIs) which try to bring them closer to industry. The group's comments on the Science and Engineering Research Council show how large some of the more successful schemes in the field are, with 760 new cooperative studentships in 1981 alone, and 100 firms enrolled in the SERC-Department of Industry-backed Teaching Company Scheme.

However, the report still finds a gap between DoI and SERC interests, covering "research which HEIs are well-equipped to carry out, which the DoI considers too 'basic' and the SERC too orientated to a specific industrial problem to merit support".

ACARD calls for research councils and departments to work closer together in these areas, with extra money coming from departments as they feel that the SERC, in particular, spends enough on industrial work.

The other main organization in the field, the British Technology Group, is treated more gently by this report than by other recent commentaries on commercial exploitation of academic ideas. The group endorses earlier suggestions that the BTG's right of first refusal on inventions developed with public funds be removed, but judges that its advice will still be needed by many institutions.

## The go-between

This has given him a clear idea of the obstacles to technology-transfer out of academia and into the market-place. "I've had more than 20 years interested in how you get a sympathy in academia for industrial problems and academics, and how you get a realization in industry of what academics have available and what their needs are."

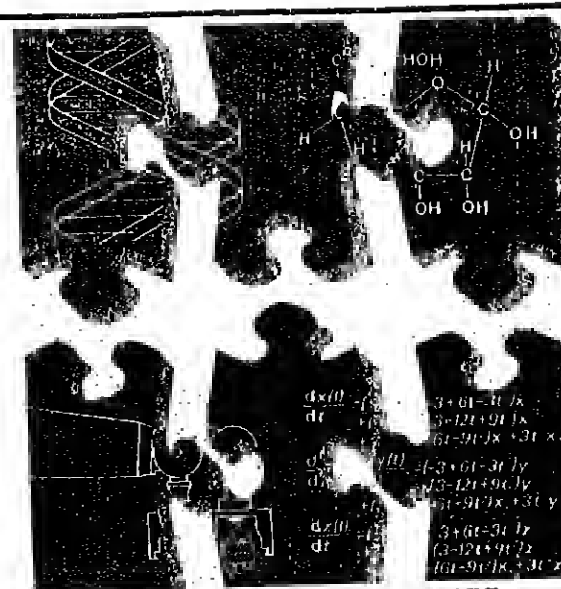
Such a long look at the problem reveals a number of barriers to communication. Academics want to pursue a problem as far as they can, while the production engineer is satisfied with something that works, and will then turn to the next problem. The two communities have different systems of reward, working conditions and ways of communicating among themselves.

And they operate on very different time scales. Dr Bragg said he noticed that in university his diary was cluttered with entries for the next year or so. But in industry it was black for two weeks and then almost empty. Hence the harassed manager's frustration when a new university contact says: "That's an interesting problem. I'll start work on it in October."

Aside from these differences in attitude, communication is often hampered by a simple lack of suitable information. In his work as a broker, Dr Bragg found he realized more strongly how poorly universities sent their work to non-specialists outside. "It's really a question of it not being considered what's going on in the remit to present what's going on in the university to the average technical director."

A complete change of heart was needed. "It's exactly like getting the pure scientist to realize that the application of work is in fact slightly more complicated than getting the understanding in the first place." Both applying research and explaining original work to non-specialists took far more effort than writing an academic paper.

The ACARD report stressed universities' ignorance of what academics have to offer. Only time will tell if government awareness campaigns and meetings organized by the Royal Society of Arts or the Confederation of British Industry, as suggested by Dr Bragg, will overcome this lack of interest. The record of the SERC-Royal Society industrial fellowships scheme, which attracted only 31 applications in its first 18 months, is not encouraging. However, the group also calls for a review of the success of its proposed measures in three years, which may give an opportunity to redress the balance between efforts on the academic and industrial sides of the fence.



Forging ahead: from the cover of the ACARD report

## Sounds familiar

The report by the Advisory Council for Applied Research and Development acknowledges that subject is not new. And many of the group's comments will have a familiar ring to any reader familiar with the Docksey report to the Confederation of British Industry and the Committee of Vice-Chancellors and Principals, published 13 years ago. Docksey: "There is widespread expression of good will and willingness to establish links between university and industry."

ACARD: "There was unanimous agreement from all respondents that Higher Education Institution (HEI)-industry links are beneficial to both parties."

Docksey: "Both sides see the problem overwhelmingly as one of establishing or developing personal contacts."

ACARD: "The most productive interaction occurs through direct personal contacts."

Docksey: "The major difficulty in the way of closer collaboration is lack of mutual understanding and appreciation."

ACARD: "Poor communication and misunderstandings between industry and HEIs were seen as a major barrier."

Docksey: "Judgment on the balance between basic and applied research is highly subjective, but we believe it would be sharpened... If there could be a proportion of research having recognizable applications."

ACARD: "We have no desire to undermine excellent research and scholarship of any kind... (but) we see the need for a more balanced allocation of research resources within HEIs by enabling researchers who wish to do so to undertake more industrially oriented work."

Docksey: "Universities should encourage more staff to develop expertise of use in industry and recognize both this and the ability to communicate it to industry as a major factor when considering staff for promotion."

ACARD: "Industrial work should be taken into account in academic promotions."

The ACARD study comments that, in spite of earlier reports, "the record of achievement in the past 15 years has not been good and further initiative to improve matters is needed."

comprehensive database would save everyone a great deal of trouble. He suggested that the cost could be kept down by making preparation of an entry a condition of each new research grant. As Prestel can also be used to collect payments, the system could even be self-supporting.

But even if this directory were set up, and every managing director had a terminal on the office desk, Dr Bragg and the other SERC brokers believe they would still have a role to play. A regional broker would then act more as an adviser, helping a company select the best contact from a range of possibilities. Stephen Bragg's colleague in the South West, Arthur Houghton, felt that an independent regional broker served industry better than a band of industrial liaison officers in different institutions.

"They tend to have strong institutional loyalties," he said. "An industrial liaison officer will find you someone in the university, but not necessarily the most expert for your problem." And Mr Fred Parmenter, SERC broker in Surrey, also believed that regional operation had been effective, though if the scheme continued he felt it should have closer links with other organizations.

The brokers differ on whether the SERC is the best agency to carry on this kind of work. Mr Parmenter recalled that the council's charter gave promotion of basic research as its main responsibility. But they all agree that the scheme has been worthwhile, and something like it should go on.

Stephen Bragg is in no doubt, and he has proposed that the system might develop to 10 times its present level, bearing in mind the number of firms still unvisited in each region as well as the large areas not yet covered at all. The ACARD group was set up with a promise from Mrs Thatcher that money would be found to carry out its recommendations. Only a small fraction of the 10m the group sought for an industrial "seedcorn fund" would be needed for an enlarged brokerage scheme.



Stephen Bragg: SERC broker in Cambridge



## Geoff Maslen reports on the widespread unemployment which has hit Australia's youth

You're better off being an adult in Australia today. The prospects for teenagers are bleak. The facts about their situation can be summarized in the figures which are grim. The figures show the misery involved in being a young person in Australia. The figures show the hopelessness of the future for many young people.

But to grasp the magnitude of the problem, figures are needed. Here are some of them:

- The teenage jobless rate is now 30 per cent and rising. In the past 10 years, unemployment among young Australians has increased fourfold and there has been a sharp increase also in the number of young people who are experiencing longer periods out of work.

- The number of 15 to 19-year-olds in full-time employment has fallen by more than 150,000 in the past 15 years, from nearly 60 per cent to less than 40 per cent of the teenage population. The fall has been considerably sharper for females than for males and for younger teenagers than for older.

- Despite this, fewer young people have been staying on at the end of secondary school - at least until this year. Only 35 per cent of teenagers remain to complete year 12, compared with the 70 to 90 per cent who do so in America, Canada and Japan.

- During the 1970s, more girls than boys stayed on to the end of high school, but the proportion of those who went on to higher education fell about twice as fast.

- There are growing numbers of homeless adolescents, forced out onto the streets because their parents cannot afford to keep them, or to seek work in places far from home.

- Since 1975 there has been a significant decline in the number of young full-time students in Australia's universities and colleges of advanced education. A loss among males equal to one student in six occurred between 1975 and 1980, although the figure for females was less.

Fewer children from underprivileged homes are now getting access to higher education. The middle-class dominance is returning to universities, after it had appeared to be receding.

To date, state and federal governments have approached these problems in a hopelessly piecemeal and ad hoc fashion. They have generated a bewildering array of uncoordinated support services, training schemes and transition to work programmes, run by a plethora of committees, departments, instrumentalities, statutory authorities and voluntary aid groups.

For instance, some 24 Commonwealth and state government departments have varying degrees of involvement with the needs of young people. More than 12 voluntary agencies and an unknown number of municipal authorities provide services. There are at least six government bodies set up to



The hedonistic image of the Australian surfer belies the seriousness of the statistics.

## Rough seas of the recession

confront the 16 or so employment and training programmes whose acronyms (GTA, CYSS, EPUY, SYTEP) now constitute a whole new vocabulary of bureaucracy.

The mechanics by which grants, allowances, benefits and subsidies are supposedly used to help young people are also possibly complex. There are some 10 different financial assistance schemes, along with half a dozen special services in the areas of health, recreation and the law.

Huge sums of money have been spent expanding this administrative maze, yet the difficulties facing teenagers are increasing. The much-heralded but controversial AS25m transition from school to work scheme was ushered in by the Fraser government in 1979 with the intention of making unemployment "the least attractive option" to adolescents. Since that time, unemployment among the young has increased 200 per cent, although perhaps now some of them are better educated.

In its election platform, the federal Labour government promised a comprehensive youth policy, an increase in enrolments in secondary and technical and further education by 30,000 over the next three years, and a lift in university and college numbers by 15 per cent, in the face of today's tide of problems, these figures are looking increasingly inadequate.

Recently the prime minister, Mr Bob Hawke, offered his own solution: teenage Kibbutzim. Under Mr Hawke's plan, communes of kids would be created across the nation.

Young people would learn self-sufficiency, and weaving their own food would presumably take them out of the paid workforce and so lessen the demand for jobs.

Lateral thinking among politicians is so rare that the Hawke idea has to be applauded. Unfortunately, it almost certainly wouldn't work, at least not on a scale large enough to be a difference. That isn't just because persuading large numbers of youngsters to radically alter their lifestyles would be difficult. It is also because of the inherent conservatism of Australians and their predisposition to the conventional Protestant work ethic.

The chairman of the Schools Commission, Dr Peter Tannock, recently came up with another suggestion: more, much more, of the same. Dr Tannock called for a tripling in the proportion of secondary students who stay on to the end of school.

Dr Tannock wants all those students who drop out of school at present to stay on. Since some 250,000 children start their secondary education in Australia each year and fewer than 90,000 remain to the end, that would entail enticing more than 160,000 15 to 18-year-olds back into a system that has, for many, systematically failed and rejected them.

Calls for communes and "full education" programmes, then, are simply further, if more exotic, examples of the fragmentary nature of the proposals which have so far plagued discussions on youth issues. What has been lacking is any systematic analysis of the policy

options and any coherent, long-range plan to enable Australians to tackle seriously the problems facing their young.

That is why a report on youth policies released this month is so valuable. Prepared for the Victorian government by state coordinator general of education, Dr Lenore Shears, and a research assistant, Ms Jenny Matthews, the report is the first of its kind to be produced in Australia.

It is the result of a three-month, 11-nation study tour by Dr Shears and a six month analysis by him and his assistant of more than 160 research papers and reports dealing with youth affairs.

The report points out that in Australia there is no comprehensive national statement of what constitutes the "youth" age group, its needs, problems and responsibilities, or what objectives are appropriate to meet them. It says Australia and the United States have the most uncoordinated approach to the problems of youth and their solution among the 11 countries Dr Shears visited.

Among the 27 recommendations, the report calls for a national summit on youth and the establishment of a national committee on youth policy. An immediate task of the national committee would be to set up an inquiry into the costs of all existing youth assistance programmes with a view to replacing "the present array of costly and ineffective financial support systems" by a logical and coherent basic youth grant and a means-tested youth

allowance.

Under this scheme, Dr Shears said, an allowance would be paid to a young person from the age of 15, with the payment of family allowance to the parent of the student cutting out at that point. The allowance would be supplemented by a means-tested grant.

Such schemes to get more young people back into the education system, however, do not confront the reason why so many young people drop out of the first place. According to Dr Shears, many teenagers have a distaste for the institutional nature of school and the dependent status they are forced to adopt within it.

The irrelevance of much of the curriculum, the lack of success at recognition, and the desire for status and independence that would provide are often fundamental to the decision to leave school, Dr Shears said.

In the report, Dr Shears and Ms Matthews propose the setting up of a chain of "youth complexes" across the country. Places that would provide only school or college programmes, also other necessary youth services, without the formality and compulsion of school.

The complexes would be open early in the morning to late at night during the week and at weekends, and they would be staffed by teachers, social workers, youth, welfare and community education people, doctors, nurses, counsellors and financial advisors.

"Easily available to young people, the youth complex could become the centre to which 15 to 18-year-olds turn for assistance, and in which special courses could be developed to meet their educational needs," the report says. Existing secondary and technical schools or further education colleges could be adapted to these purposes so that capital costs could be kept to a minimum, it says, and it argues that there is already an available supply of specialist staff in the community.

Along with the youth complexes, there should be a coordinated range of training and education opportunities for all school leavers to replace the present disjointed series of training programmes for the unemployed. At present, the Shears report says, young people themselves should be involved in the decisions that affect them by being given a say and participating in the policy making committees.

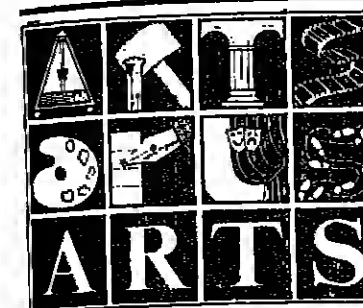
Although the report is commendably coherent and its arguments cogent and persuasive, it fails to acknowledge the crucial factor that there are not enough jobs for those who want them - whether they are young or old. Nor does it consider the prospect that Australia may have a large core of permanently unemployed young people.

Moreover, UACA is considered terribly autocratic compared to the more democratic, public universities. No student resolutions, circulars, and publications are allowed without permission. Students are not represented on governing bodies and may be expelled without formal explanation.

In response, UACA argues that those pressing for struggling regulation are merely frustrated bureaucrats, or even socialists, who cannot accept the free market's emerging verdict. UACA's quality is so low, why do students increasingly flock there? One answer is that the public sector is not doing all that well in quality and job replacements. Furthermore, the budget constraints of the early 1980s have necessitated a restrictive governmental fiscal policy which, as the public institutions themselves argue, weakens public quality. By contrast, UACA argues, its students are choosing to pay for an education that works on the job market. If the public universities look down their noses at the quality of this, they do so at their own peril.

And if all this has produced profits, so be it. Actually, UACA itself has claimed non-profit status, while its affiliated colleges have been free to pursue profit.

It is too soon to tell how the present struggle will resolve itself. At stake is UACA's ability to continue its free-market orientations. Already, however, government regulations have decreased the prospects that additional institutions might copy UACA.



J. R. WATSON reviews the new touring Arts Council exhibition on John Ruskin; BRIAN MORTON discusses Faber's new venture into poetry cassettes; and HUGH CANNING reviews the British premiere of Kurt Weill's "Street Scene".

## Ruskin in limbo

I travelled to Sheffield on election day to see the Ruskin exhibition. The rain of the night before had made the fields and hedges even greener in this greenest of summers: through Leeds and Wakefield and Rotherham the train ran past the yards of abandoned factories where the puddles were a standing blackness and the heaps of old iron lay around like the debris of a battlefield. The once-busy factories now look ramshackle and neglected, their doors flapping in the wind. But where Ruskin once suggested a Sheffield commissariat ruled by a Doge, in the Socialist Republic of South Yorkshire, Sheffield itself put a brave face on it, and shone in the sun. In the park behind the university, the grass and the wall-flowers were so bright that they hurt the eyes: an enormous suture of Ebenezer Elliott declared itself with word only on its great plinth: ELLIOTT.

No statue of Ruskin, of course; but then Ruskin had his own museum of the Guild of St George at Wakeley, built on the top of a hill to discourage the idle. The museum has long since moved, and then closed, but now the collection is to be brought back to Sheffield and re-housed near the city centre. Meanwhile, at the Mappin Art Gallery, the postcard of the peacock's breast-feather (which is on the front cover of the catalogue of this exhibition) is no longer available. We used to have not for a long time now. Nearly 80 if Ruskin is in limbo here, nearly 80 not quite forgotten, and about to enjoy a new existence; but what will be his relationship with the city that he was so fascinated by, with the people by whom he was so taken, the "Yorkshire operatives" as he called them, with the place that he found so strange, so smoky its hills, so different from his beloved Venice?

In the Mappin Gallery, the white walls of the big, low-ceilinged room, cool after the rhododendrons and azaleas of the park, give back an enigmatic answer. Here, undoubtedly, is something substantial: here is Ruskin, RUSKIN, the single name taking over from the catalogue's John Ruskin, and certainly falling into place in the mind more actually than ELLIOTT. Here is Ruskin in all weathers, a man for all seasons, watching water, clouds, earth with a passion and intensity that are astonishing, and an individuality that asserts itself, Ruskin, at every point. For although the exhibition is short on biographical material, the life of Ruskin's mind is here in abundant brief snapshots: Switzerland, the Alps, the Gothic of Northern France, Venice, Verona, Tuscany, stones, flowers, skies, all are represented to give an inkling, but only an inkling, of Ruskin's extraordinary mind. For the great problem of any exhibition of Ruskin's work is the massive and intricate substance of his achieved work; so exhibition, as the foreword to the catalogue points out, is a paradox, because "the works of art are

gathered together to point beyond the gallery that contains them."

So the exhibition can give only an idea, and it will mean most to those who already know and admire Ruskin's work. But if the exhibits point beyond the gallery, what do they point to? Perhaps they point principally to Ruskin himself, as the catalogue seems at times to suggest, so that the visitor gets the feeling that the greatest exhibit of all is somehow missing: there, in the centre of the room, there might have been the Library Edition of Cook and Wedderburn, and we could all have grown old happily and harmlessly pursuing the labyrinthine and interconnected turns of Ruskin's mind. Or do they point out of the Mappin Gallery, past Ebenezer Elliott, to Sheffield itself, with its chesep husband, its underground walkways, its dry-cleaners sparkling in the sun? It is a crucial question: this exhibition makes the visitor face, in a particularly sharp and poignant way, the problem of the relationship of a mind like Ruskin's, rejoicing so much in his own looking and learning, with the world outside the park, moving endlessly on its metalled ways of appetite and fulfillment. It is the old problem of art and life, the arts faculties in all universities, even if all education in relation to the social sciences and social sciences faculty rolled into one, with some representation from theology and science as well, boldly outlined the problem: he developed his own ideas, his own sensibilities, in ways that are original, first-hand, exciting; yet he also had a strong sense of didactic purpose, a desire to influence others to love the true, the just, and the beautiful - nowhere more so than in Sheffield. This exhibition, and its appropriate placings, make the visitor ask curious questions about the whole enterprise of learning and living at the present time.

Ruskin and Sheffield may come together again when the new museum is opened. Meanwhile, this exhibition is full of delights: the miniature paintings of Swiss and Italian towns, the photographs and plaster-casts of Rouen, the water-colour of Abbaye, all the work in Venice; and then the stones, the cloud-studies, the drawings of leaf-shapes, of flowers, of mosses. All bear the stamp of Ruskin's endlessly inquiring mind, so utterly open to new experiences and yet also so sure of itself. His openness and sureness, his devotion to art and truth, he hadly needed: it is time the peacock's breast-feather was on sale again.

J. R. Watson

J. R. Watson is professor of English in the University of Durham.

The exhibition has just transferred to the Walker Art Gallery in Liverpool, where it can be seen until August 1. Thereafter it travels to the Abbot Hall Art Gallery, Kendal (August 13 to September 18) and the Museum of Modern Art, Oxford (September 23 to November 13).



This archway, which bears the south shaft of the west entrance to the cathedral in Verona, was sketched by Ruskin in 1869.

## Ancestral voices

Faber Poetry Cassettes  
Ted Hughes and Paul Muldoon  
ISBN 0 571 13090 9  
Seamus Heaney and Tom Paulin  
ISBN 0 571 13090 7 £6.95 each

With poetry on cassette, The Who's Pete Townshend, in the editorial strength, and Blackhead Ian Dury doing intros for the *Hard Lines* anthology, Faber seem to have taken an eyes-shut, nose-held leap into the post-book era. It's tempting to wonder what Eliot would have thought.

The better of the two Faber poetry tapes features Seamus Heaney's eighth of his most characteristic poems - "Death of a Naturalist", (once described by the *Irish Times* as "a long, disappointing poem about frogs") - "The Otter" - into a persuasive audio. The other side, and side two of the second tape, presents work by two more Irishmen, Tom Paulin and Paul Muldoon, leaving Ted Hughes in not-quite-splendid isolation on side four.

If Heaney claims in his introductory comments, Old English verse and Gerard Manley Hopkins were the main influences on his rhetoric and prosody, it is Eliot ironically who looms behind the solemn images and in the saturnine delivery. Eliot was the Saturn of English verse, devouring his offspring with grim relish. Only now is it becoming possible to absorb his influence safely. It is in Heaney's work that Eliot's tradition and sense of tradition emerge most strongly, and it is Eliot's voice which echoes.

Eliot was a poetical poet. His awareness of antecedents, his social thought, and the whole aesthetic of indirection have profound undertones for a poet like Heaney faced with a situation which, like the language itself, is historically perverse: all resonance and echo and very little visible politics.

Eliot's work presented slippages and occlusions of time; present moments with a whole freight of memory and the prophetic. In Heaney's verse, the working out of political and social dilemmas slips sideways and back, becomes an archaeology of prosody, an exploration of the way history and language keep pace (or, as in Northern Ireland, fail to). Secularist killings (hooded, random, superficially ideological) are set against the pest-presence of Tollund Man, a symbol of life-in-death, fertility, time; Njals saga informs the apparatus of political mourning; an other sports in a wild-life "museum" in the Arizona desert; other times and places. Indirection.

For Paulin, the same "repulsive dullness" at the edge of history becomes the subject. Politics in Ireland becomes a "shadow in the mind"; borders are imaginary, unreal lines that kill. Ideology is the opposite of truth. Irony comes to bear witness to the possibility that a change in history and human nature is in the wings.

Paul Muldoon remains content to attempt narrative and to foreground the literary echoes; the indirection becomes uncomfortably noticeable. And with Ted Hughes, a large, shambolic "irresponsibility", indirection becomes evasiveness. Of the four, Hughes sounds least convinced, tired, faking passion. Myself, however, may not be the nub of a new *poetism* and West Yorkshire certainly isn't Armagh but Hughes (who brilliantly dissected a cultural dilemma in *Crow*) seems only too content to juggle myth and sound in isolation from slithering imperatives. Eliot reserved his smiles in life. If it is his shade behind the three Irishmen and his voice we hear, the absence of a smile doesn't matter. He would approve. Above all else, the modernists - Pound, Bunting, even tone-deaf Yeats - were great voices.

Brian Morton



The German artist Albert Weisberger (1878-1915) painted "Picnic", above, in 1910. Along with other paintings from the Moderne Galerie, Saarbrücken it is now loan to the Lefebvre Museum and Art Gallery for its exhibition "German Impressionism and Expressionism", which runs until August 21.

## 'Get a load of that!'

Kurt Weill's American Dream, his "Broadway" opera *Street Scene* (1947) "based on a successful play by Elmer Rice" should have been done long ago, and lavishly, in the West End. It has instead had to wait for over 35 years since its New York premiere for a first British performance, on June 6, and that as a "workshop" staging by music students.

In the programme booklet, the Royal Academy of Music printed an abject apology for the absence of a full-scale production - illness and the withdrawal of the producer - but none was needed. This was a simple hut exhilarating show.

Choreographer Anne Sweeney against a backdrop of bare rostra and steps, in which the young cast and orchestra seemed galvanized by the work. And justly, for here Weill's natural gift as a song-writer can be heard intoxicated with the heady spirit of the American musical: the sumptuous melodies, ritzy rhythms and lush harmonies inhabit a new romantic world, far distanced from the dry, mordant irony of his prewar Berlin collaborations with Brecht.

The RAM students sang, danced and acted the moving tale of the Mauryan family and their cosmopol-

itan neighbours on the New York sidewalk. Elisabeth Wiolet's richly sung Anna, the unloved wife hired into an illicit, but openly discussed, bond with the suburban-slicker, Steve Sankey, caught precisely the dilemmas facing the depressed tenement dwellers. Unlikely like her daughter, Rose - a lovely performance from Carol Green - she is unable to escape her self-imposed captivity except through violent death, a dramatic scene where her husband Frank (Brindley Sherratt) returns unexpectedly from work to catch her red-handed with Steve and fills them both with lead.

Weill depicts the life of the tenement block, its residents' hopes and fears, with lively ensembles - the priceless "gossip" trio, "Get a load of that!" and the delicious "Ice-Cream" sextet - and great emotional peaks, none more heartstopping-tearing than the cloral lament for Anna. "The woman who lived up there".

The RAM Orchestra, under Nicholas Cleobury's stylish direction, indulged in the sentiment of a glorious opera which now deserves its first full-scale production in the West End.

Hugh Canning

## Events

### Continuing Exhibitions:

Until July 16, Arts Centre, Aberystwyth.  
Nicholas Evans: paintings.  
Until July 17, Fens Gallery, Hull.  
Lawrence Gowing retrospective.  
Until July 17, Side Gallery, Newcastle upon Tyne.  
Isabella Jędrzejczyk: photographs of the North East.  
Until July 18, Dixon Gallery, Institute of Education, London.  
Paintings and drawings by Richard Webb.  
Until July 25, Yorkshire Sculpture Park, Bretton Hall College, Roy Kitchen.  
Until July 31, Museum of Modern Art, Oxford.  
Hanselman Art: Papers Déchirés and related works 1928-1943.  
Until August 13, Talbot Rice Centre, University of Edinburgh.  
The Torrie Collection.

Until August 28, Sainsbury Centre, University of East Anglia.  
Treasures from Norfolk churches.  
Until September 10, Whitworth Gallery, University of Manchester.  
Great American Prints: Whistler to Warhol.  
Until October 30, Victoria and Albert Museum, London.  
Olivier Messiaen (1904-78): stage, film and interior designs.

### New Exhibitions:

From tomorrow, Art Gallery, Southampton.  
Paper as Image.  
From tomorrow, Kettle's Yard, University of Cambridge.  
Ben Nicholson, paintings 1919-30.  
From July 12, Museum of London.  
Masque: social history of the masked ball.  
From July 15, National Gallery of Scotland, Edinburgh.  
Robert Scott Lauder's Master Class: MacTaggart, Orchardson, Pettie and their Edinburgh contemporaries.  
From July 16, Gainsborough House, Sudbury.  
Suffolk: Victorian landscape and Edwardian Wilkins Waite.  
From July 16, Library Gallery, Milton Keynes.  
Private Views: modern portraits and self-portraits.  
From July 16, Lion Gallery, Birmingham.

ham. Vaughan Grylls' *Views of Our Time*: photograph noiaes.

Evening. Theatre, University of Essex.  
Old Times, by Harold Pinter.  
Tonight, tomorrow. Vandyck Theatre, University of Bristol.  
Archangel, by Paul Unwin and John Downing.  
Images of the life of Samuel Taylor Coleridge.  
Tonight, tomorrow. Palace Theatre, Manchester.  
Houston Ballet.  
Tonight, tomorrow. Drama Studio, University of Sheffield.  
The Lover by Virginia White.

Tonight, tomorrow. Theatre, University of Manchester.  
Brecht's *The Good Person of Szechwan*.  
From tomorrow until July 23, The York Early Music Festival, with concerts by Christopher Hogwood, the Landini Consort and many others.  
Box Office: 86 Micklegate York YO1 1JZ.  
July 11, Arncliffe, Bristol.  
Part of programme by Ballet Rambert: Richard Aston discusses his ballet *The Box of Spring*.  
July 11 to 16, The Place Theatre, London.  
Senior students of the London Contemporary Dance School.

Tuesday July 12, St John's Smith Square, London.  
Goldsmiths College, NIOS Orchestra: Dvořák, Bax and Rachmaninov.  
Wednesday July 13, Cinema, Triangl Arts Centre, University of Aston.  
Claude Chabrol's *Violence Noire*.  
Thursday July 14, Arts Centre, University of Warwick.  
Whispering Heights (William Wyler, 1939).  
July 18 to 23, Queens' Green, Cambridge.  
The Medieval Festival in Garguina, adapted from Rabelais. Part of the Cambridge Festival, which also includes the Cambridge Theatre Company in John Galsworthy's *The Forsyte Saga* (July 27 to 30, Mumford Theatre) and the Cambridge Folk Festival (July 29 to 31).

### Egyptian dress

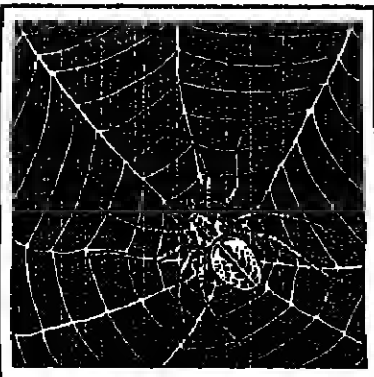
The portrait of Sir John Maxwell in Egyptian dress which appeared on the arts page on June 10 should have been credited to Glasgow Museums and Art Gallery. Sir John Maxwell Collection, Pollok House, lent by Mrs Anne Maxwell Macdonald.



Animals and plants are subject to environmental effects such as stress or corrosion in the same way as artificial structures. However, the structural materials and the way in which they were used, for example, a cat are quite unlike those in a motor car. Although many of the problems of design are the same when expressed in terms of a power-to-weight ratio and fuel efficiency, the solution is very different.

Some natural materials particularly cotton, wool, silk and wood are of importance as industrial materials in their own right and so receive a fair amount of attention. Bone, teeth, skin and cartilage are studied in association with medical research. Outside these groups there is little direct incentive to study biological materials. The main benefit of a broad study must be that in understanding the use of materials in biology we can see new ways of combining and using synthetics.

Biological materials are much more complex than their synthetic equivalents; they vary from point to point within an animal, often showing gradients in structure, they change with time through the life of an animal and vary from individual to individual. Clearly no metal forged in plastics mould would choose to work with such a system - industry prefers the predictability of uniform, reproducible materials whose properties can be accurately measured. There is a trend now to the use of composite materials, that is metals or plastics reinforced with glass fibres or carbon fibres. These materials offer great strength and toughness per unit weight but their properties are very dependent on the direction and organization of the fibres. This makes the designer's job quite difficult because he has to allow for a material which is strong in one direction but weak in another.



There is a continued complaint about the lack of good strength information about composite materials which really comes from our lack of familiarity with them. In nature most materials are composites, often with several types of fibres and mineral particles reinforcing a plastic matrix. Thus in this area at least we have much to learn from natural materials.

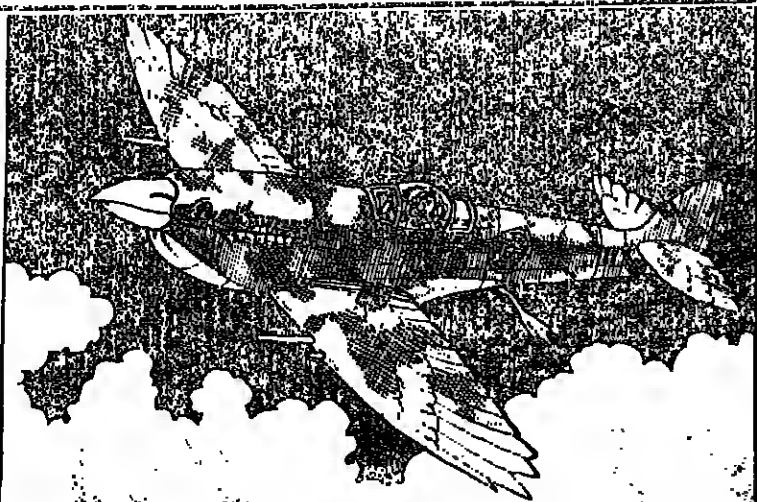
Biological materials can be classified as tensile materials, rubbers, plant composites, tough composites and stony materials. Tensile materials are those fibrous materials such as hair, tendon, silks and the cellulose fibres in plants such as hemp. These are the ropes and straps of the natural world.

Rubbers in a pure state are relatively rare; one good example is the small fish which springs open the shell of a hivalve such as a mussel. Rubbers do occur frequently in combination with other materials in plant composites like skin and help it to spring back when stretched rather than going baggy. Tough composites include bone, horn, insect cuticle and wood while the stony materials are shells and tooth enamel which are mostly mineral. Of course, having made such a classification we immediately find materials which do not fit but we can use this to develop some general ideas from specific examples.

Tensile materials are the natural analogues of the synthetic fibre-forming polymers such as nylon, polyethylene, terephthalate ("Terylene") and polypropylene. The molecules are chains of 1,000 or more identical units. In silk the units are amino acids, the building blocks for proteins and very similar to the basic units of nylon. In cellulose, a polysaccharide, the units are sugar molecules which are linked end-to-end to form chains the artificial fibre, rayon, is cellulose which has been dissolved and spun back into a fibre. Cellulose is the reinforcing fibre which confers strength in almost all plants while in mammals this role is played by collagen which makes up the ligaments and tendons that bind bones and muscles

## Seagulls and Spitfires

Paul Calvert examines the relation between natural materials and modern synthetics... what is there to learn from nature's processes?



together. In insects and crustaceans the strong fibre is chitin, another polysaccharide.

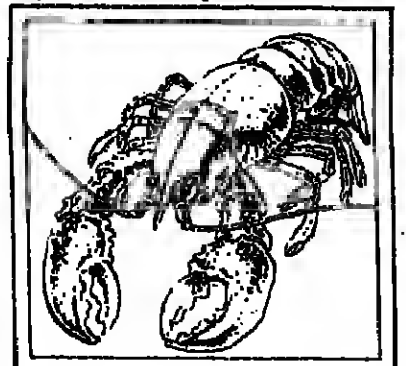
In tensile fibres the chain molecules are able to pack together closely and parallel to form small crystals which comprise most of the total volume. These regions where the chains are tightly bound together make the fibres strong and insoluble.

Synthetic fibres are produced either by melting the polymer at 200°C or more and extruding the viscous liquid through a fine spinneret when it cools and stretching it to make a strong fibre or dissolving the polymer in a powerful solvent and then extruding it into air or another liquid where it loses its solvent and precipitates. Nature does not find it convenient to work at high temperatures or with solvents so there is a problem in producing fibres which will be insoluble and water-resistant without them precipitating and clogging the cellular machinery that makes them.

Commercial silk is produced by the larvae of the silkworm *Bombyx mori* (a moth) to construct its cocoon. The main part of the fibre is fibroin which is a strong fibre very similar to nylon. This protein collects in the silk gland as a concentrated viscous solution in water which is pulled out through a small spinneret by a wounding movement of the silkworm's head. The shearing of the solution flows through the fine hole apparently causes the fibre to precipitate. It has been reported that before spinning the solution is structured and birefringent suggesting that it is in a liquid-crystalline state.

This is particularly interesting since in recent years Du Pont has started producing Kevlar, a high-strength fibre which is also spun from liquid crystalline solution. It was found that by starting with liquid crystals the fibres could be produced with very high degrees of molecular alignment and consequently great strength. The Du Pont process involves extremely unpleasant acid solvents where the silkworm seems to manage with only water. The disadvantage of the silkworm method would be that accidental stirring could set off the precipitation before time.

Mammals opt for a safer route in producing collagen. The cell produces short rods of procollagen consisting of three protein chains intertwined into a triple helix with globular ends like

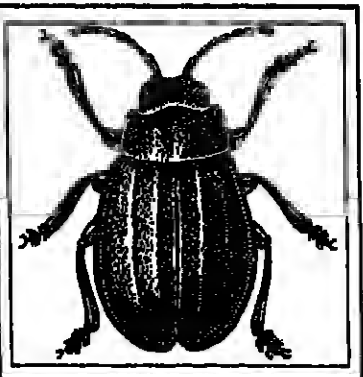


match-heads which prevent the rods approaching too closely. Outside the cell the heads are cut off enzymatically to produce tropocollagen rods which aggregate to make collagen fibres. These fibres are initially very weak but subsequently cross-links form between the ends of adjacent rods so that the whole is linked into a strong fibre.

With cellulose in plant fibres it is not very clear what happens. The cellulose seems to form on granules on the outer surface of the cell membrane. There is some evidence that these enzymatic complexes travel a spiral path around the cell depositing cellulose fibres in

the fashion of a cable-laying ship.

Young's modulus is a measure of the extension per unit of applied force, the elasticity, while the tensile strength is the load at which the fibre will break. *Bombus mori* silk thus compares well with commercial nylon. Tendon is surprisingly soft and weak, one might wonder why mammals did not opt for something better. However, a comparison between the narrow load tendons on the back of the human hand with the bulky muscles on the front suggests that a stronger fibre would not offer much advantage in terms of weight or space saving, thus collagen is adequate. Another great disadvantage of many natural materials is their sensitivity to water. Since they are produced by aqueous chemistry they must be hydrophilic and water acts as a swelling and softening agent.



Spiders produce a variety of silks for different uses. The garden spider *Araneus diadematus* has five different silk glands and three sets of spinnerets. The strongest is the dragline silk which supports the spider as it travels and forms the frame and radii of the orb web. The web spiral is highly extensible silk covered with a sticky layer such that a fly will become entangled rather than being able to extend the fibre to break it. This rubbery fibre can be achieved by modifying the amino acid composition such that large side groups on the chains prevent them from packing closely enough to crystallize. The cocoon is a bulky, insulating mass of wavy fibres which is difficult for a predator to cut through.

To return to the purely tensile materials, it is interesting that a number of chemically different materials such as cellulose, silk and nylon can all produce roughly comparable properties. Also, despite the great variety in external structure in plants or animals there is so little variety in the basic building materials.

In studying natural composite materials we move into a very difficult experimental area. In studying biological materials the engineer has to surrender ideas of doing mechanical tests on identical large specimens and has to devise special methods for building and extending small pieces of material while preventing them from drying or degrading. In a composite like skin or bone the structure will also vary with depth the position and any real definition of "the" strength of skin or bone is impossible.

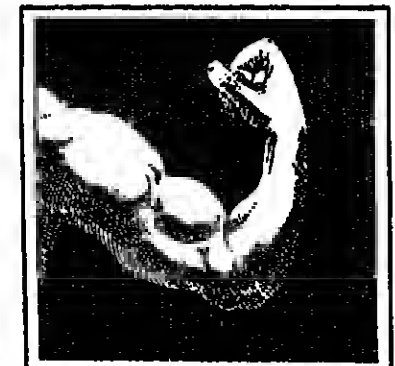
The plant composites consist of fibres embedded in a soft, jelly-like matrix. The same fibres and matrix will appear pure or in different combinations in other parts of the organism. The final properties will depend on the fraction of fibres, whether they are linked into a continuous mesh or are separate, their orientation and how they are bonded into the matrix.

One characteristic of many such materials is an upward curving ("J-shaped") stress-strain curve; the material initially extends quite easily then

as it is pulled more it becomes relatively inelastic and the load required climbs rapidly. Thus skin is a composite of collagen and elastin fibres in a protoplasmic matrix arranged as a series of layers and covered with a coat of hard keratin scales. When the skin is first stretched the load is taken up by the rubbery elastin fibres while the network of collagen just distorts. As the extension increases the stronger collagen takes up the load and the skin becomes much more resistant. Another example of this behaviour is arterial wall which is constructed with a thin lining, the endothelium, then concentric layers of smooth muscle and of elastin reinforced with collagen and finally a loose outer felt of collagen and elastin fibres. The arteries close to the heart (or should be) highly elastic in order to smooth the pressure pulses from the heart. However, as the artery expands the wall becomes thinner so a rapid increase in inelasticity is necessary to prevent the artery simply inflating and bursting at one point. A long rubber balloon behaves similarly. It is hard to start then rapidly inflates at one place then the rubber starts to harden rapidly enough that the expansion pauses on to the rest of the balloon and it becomes uniform again. In the artery this is achieved as the concentric layers of fine elastin fibres, and collagen fibres successively take up the load.

One particularly elegant use of this type of structure is in the sea anemone *Metridium* the body wall (mesogloea) of which is about 90 per cent salt water in a jelly of collagen fibres and a proteoglycan matrix. The fibres are mostly arranged circumferentially around the mesogloea with an outer layer of fibres at 45° to the axis. By greatly pumping in water the anemone can extend lengthwise so that the outer fibres slowly slide past one another and the inner circumferential fibres stop the creature growing in radius. The matrix acts as a very viscous glue holding the fibres together so that, while the animal responds to a gentle long term pressure it will be more or less rigid to any brief force due to the motion of the sea.

Many natural materials contain large amounts of water whereas such liquid swollen materials are rarely used by man, the plasticized PVC shower curtain is one of the few examples. Cartilage illustrates the way in which



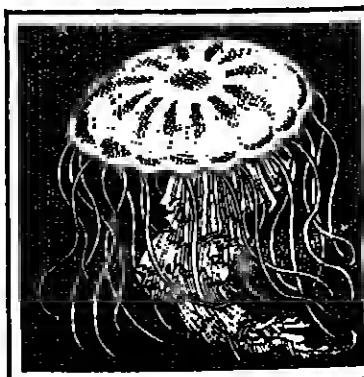
water swelling can be used to make a very cheap structural material. It is about 70 per cent water, 20 per cent collagen and 10 per cent proteoglycan matrix. The very polar proteoglycan swells with water but is restrained by the network of collagen fibres. This then serves to give the shape to nose and ears and to stop the bones wearing against one another in the joints and in the spine.

By incorporating mineral particles into a composite material we can make it much harder and stronger but not tougher. Thus bone is essentially dense cartilage reinforced by small plate-like

crystals of hydroxyapatite, a calcium phosphate.

This is perhaps a surprising choice of mineral in view of the limited supply of nutrient phosphorus and the need for it in many metabolic processes. Most shells, both the hard molluscs and the tougher crustacean shells are reinforced with calcium carbonate. This should be more available but is weaker than hydroxyapatite. This reflects the greater importance of a good strength to weight ratio for the internal skeleton of a land animal. This balance can also be seen in the comparison between insect cuticle which is all organic (chitin fibres in protein matrix) and therefore light with heavier mineralized crustacean shells. In order to be light to fly and to operate easily on land, insects have the chitin shell which is metabolically more expensive. Under water weight is much less of a problem and the same rigidity can be reached with mineral reinforcement.

In these hard composite materials increasing rigidity (modulus) is paid for by increasing brittleness. Great care must be taken in designing to avoid stress concentrations which may start to crack within the structure and to slow the growth of cracks which do form. This perfect, crack-free glass is very strong but the slightest local damage can give rise to a rapidly growing crack. Glass-fibre reinforced polyester ("fibreglass") is practically much stronger because a crack gets spread out and blunted at the interfaces between the fibres and the resin. Bones are illustrative of nature's attention to careful design and their apparently arbitrary knobby shapes are very much tailored to avoid stress concentrations near the joints. Similarly blood vessels only enter the long bones at very shallow angles, almost parallel to the axis to avoid the weakening effect of a hole perpendicular



to the base. Artificial composite materials are often built up as series of sheets (laminates) in which the fibre orientation changes by 90° between successive layers in a plywood-like arrangement. This results in a sheet which is strong when pulled in any direction but has a tendency to delaminate, the differential strains between layers cause gaps to open up between them.

In a beetle shell the arrangement of chitin fibres is not only curved but changes according to the local stresses to be resisted. The beetle is designed as a whole and not constructed from uniform sheets of composite as would be a man-made beetle. Why should anybody try to measure the strength of such a complicated structure? As an area of biology there are many interesting questions to be answered but the current emphasis on molecular aspects of biology has left such physical studies behind. Industrial applications of new biological materials are possible and in many parts of the world there are attempts to develop the use of plant fibres for reinforcement of plastics or concrete. Beyond this it is hard to see many areas where specific biological mechanisms can be applied industrially but we can learn new principles. Thus we should not try to minimize the way in which silkworm produces silk but it might be worthwhile trying to develop a similar method of spinning from a metastable solution, if that is indeed what happens. We can gain much by consideration of design in nature: this is of the integration of materials with structure, of the use of flexible structures and internal skeletons. This is not a revolutionary philosophy; the designer of the Spitfire was said to be inspired by watching seagulls, but it is a lesson that needs constantly renewing. This can never be "big science" or applied science but none the less we can learn a great deal that will be useful in materials engineering.

By incorporating mineral particles into a composite material we can make it much harder and stronger but not tougher. Thus bone is essentially dense cartilage reinforced by small plate-like

crystals of hydroxyapatite, a calcium phosphate. This is perhaps a surprising choice of mineral in view of the limited supply of nutrient phosphorus and the need for it in many metabolic processes. Most shells, both the hard molluscs and the tougher crustacean shells are reinforced with calcium carbonate. This should be more available but is weaker than hydroxyapatite. This reflects the greater importance of a good strength to weight ratio for the internal skeleton of a land animal. This balance can also be seen in the comparison between insect cuticle which is all organic (chitin fibres in protein matrix) and therefore light with heavier mineralized crustacean shells. In order to be light to fly and to operate easily on land, insects have the chitin shell which is metabolically more expensive. Under water weight is much less of a problem and the same rigidity can be reached with mineral reinforcement.

In these hard composite materials increasing rigidity (modulus) is paid for by increasing brittleness. Great care must be taken in designing to avoid stress concentrations which may start to crack within the structure and to slow the growth of cracks which do form. This perfect, crack-free glass is very strong but the slightest local damage can give rise to a rapidly growing crack. Glass-fibre reinforced polyester ("fibreglass") is practically much stronger because a crack gets spread out and blunted at the interfaces between the fibres and the resin. Bones are illustrative of nature's attention to careful design and their apparently arbitrary knobby shapes are very much tailored to avoid stress concentrations near the joints. Similarly blood vessels only enter the long bones at very shallow angles, almost parallel to the axis to avoid the weakening effect of a hole perpendicular

to the base. Artificial composite materials are often built up as series of sheets (laminates) in which the fibre orientation changes by 90° between successive layers in a plywood-like arrangement. This results in a sheet which is strong when pulled in any direction but has a tendency to delaminate, the differential strains between layers cause gaps to open up between them.

## Robert Skidelsky compares his view of J. M. Keynes with Roy Harrod's early biography

It is fascinating to follow in the footsteps of another biographer. In 1951 Macmillan published Roy Harrod's life of John Maynard Keynes. Later this year Macmillan will be publishing the first volume of my biography of the same man.

I find that my Keynes is very different from Harrod's. To be sure, there is considerably more flesh on my skeleton, which may simply be a matter of scale. But the skeleton itself is quite different. We both agree that we are writing about a genius. We both think that Keynes was the greatest economist-statesman of this century. But our treatments could not be more dissimilar.

This disparity can be variously explained. There are no doubt differences in biographical talent. We also come from different disciplines. Roy Harrod was an economist, I am a historian. Certain questions came to me naturally which Harrod did not ask, and my book is more of a "life and times" than Harrod's.

I also have an advantage in perspective. Harrod started writing almost immediately after Keynes died in 1946. The Keynesian revolution was still in its infancy. Now Keynes's achievement is part of history and it can be placed in historical context.

Harrod had the advantage of knowing Keynes and many of his friends and colleagues and being able to interview others who knew him well. Most of these persons are now dead and the memories of those still alive are less vivid than they once were. On the other hand, I have had access to a greater range of source material, both primary and secondary.

However, what makes our books so different is not differences in the information we had, but in the selection of what to put in and what to leave out. Unlike fiction, biography is based on fact. But there are far too many facts. The story one tells is shaped by the way one selects and arranges the facts. The biographer does not have licence to invent things which did not happen. But it seems he has almost complete freedom to leave out what did happen.

In this respect, biography has never attained to the scholarly standards of history. No reputable historian would deliberately suppress a fact capable of affecting the reader's judgment just because it is embarrassing to someone. Yet such omission is routine in biography.

On the other side, biography is an endless source of strained and implausible interpretations, with hardly a hint of the controlling hand of evidence. This is particularly true of literary biography, especially where the biographer sets out to be a psychoanalyst as well.

There are many facts left out of Harrod's biography which I put in mine; but before mentioning some of these, it is worth considering why Harrod considered he had to leave them out; because the reasons which impelled him to do so are, I think, by every biographer to some degree.

The first has to do with the presence of what Virginia Woolf called "the widow and the friends". She writes: "Suppose, for example, that the man of genius was immoral, ill-tempered, and threw the hoots at the maid's head. The widow would say, 'Still I loved him—he was the father of my children; and the public, who love his books, must on no account be disillusioned. Cover up, omit!' The biographer obeys. And thus the majority of Victorian biographies are like the wax figures now preserved in Westminster Abbey... effigies which have only a smooth likeness to the body in the coffin".

Roy Harrod has to contend with not one, but a whole bevy of "widows", vigorous, articulate and opinionated, of whom the least troublesome was his stepmother's actual widow, the delightful Lydia Lopokova. They were headed by Keynes's formidable brother, Sir Geoffrey Keynes. But there was also Keynes's sister, Margaret Hill, and his mother, Florence Keynes.

Beyond the family there were his intimate friends of Bloomsbury, and his fellow economists. All of them had,



John Maynard Keynes: Harrod's biographical treatment may have eased acceptance of his ideas.

Keynes believed. Criticized for attacking President Wilson in his famous book *The Economic Consequences of the Peace*, he wrote: "Attempts to humiliate or placate the Americans or anyone else seem quite futile, and I personally despair of results from anything but violent and ruthless truth-telling—that will work in the end, even if slowly". Harrod's views were far less robust, and circumstances favoured his natural tendency to discretion.

In what follows I will deal only with those of Harrod's "omissions" particularly relevant to our understanding of Keynes's character and motives, and only those covering the ground of my first volume.

The most notable omission is of Keynes's homosexuality. The result is a severely impoverished account of his feelings, his values, his friendships and his cultural context. Harrod's omissions do not allow him to make sense of Keynes's remark about his pre-1914 existence: "One's private life and enjoyment of life are the result of the pursuit of knowledge and the pursuit of knowledge and the pursuit of knowledge".

Yet the long time it took Keynes, whose genius was overwhelmingly practical, to escape from the coterie culture of the Cambridge Apostles and Bloomsbury, becomes much more understandable in the light of the specific protective functions which these groups had for him. And there are interesting connections to be made between what Schumpeter calls Keynes's "childish perspective" and his economic work, which Harrod precludes himself from discussing.

Harrod's discretion takes heavy toll of our understanding of Keynes's place within the circle of the Cambridge Apostles, a selective and secret discussion society. Harrod mentioned that Keynes was an Apostle, implied that the Apostles no longer existed (they still meet more than 30 years after his book appeared), and then wrote: "But it is time to desist from prying into the affairs of that august body".

In his early to mid-20s Keynes read the society a dozen or so papers in which he developed his ethical position and which include the earliest statement of his theory of probability, dating from his last undergraduate year. Harrod must have seen all these papers, yet he refers to none of them, and postdates the start of Keynes's work on probability by two years, thus removing it from the context of his ethical concerns.

As a result he never puts himself into a position to discuss the links between Keynes's ethics, his probability theory,

issue provided important ammunition for the anti-conscriptors in Asquith's cabinet, especially Reginald McKenna, his political chief at the Treasury.

With the passing of the Military Service Act in January 1916, Keynes came very close to resigning from the Treasury, together with McKenna and other ministers. He applied for exemption from military service on the grounds of conscientious objection to conscription (even though he was covered by a Treasury exemption).

He came to regard the continuation of the war as a criminal conspiracy on the part of Lloyd George's government—particularly Lloyd George himself. But he remained, outstandingly successful at his Treasury job, locked in a crisis of conscience.

Two letters to his friend Duncan Grant indicate his feelings. On January 14, 1917 he wrote: "God curse him (Lloyd George)... I pray for the most absolute financial crash (and yet strive to prevent it—so that all I do is a contradiction with all I feel)"; and on December 15, 1917: "I work for a Government I despise for ends I think criminal".

Hardly a trace of this tension is to be found in Harrod's account, though he had access to all the facts. Of the 1915 period, when Lloyd George himself recognized Keynes as the inspirer of the "campaign" which the Treasury were waging against his great gun programme (*War Memoirs*, ii, 885), Harrod wrote: "The work was extremely exacting. It does not seem to have given rise to major political or interdepartmental crises. All went forward smoothly. It is a happy anomaly that has no history".

Furthermore, Harrod omitted the fact that Keynes had applied for a certificate of conscientious objection, covering this up with language as slippery as that of any electioneer. When this omission was pointed out, many years later, by Clive Bell, later by Mrs Elizabeth Johnson (the first editor of Keynes's *Collected Writings*), Harrod first simply repeated his denial, then admitted he might have "overlooked" the evidence and finally promised to make changes in any subsequent edition of his text (which he failed to do).

His unrevised account remains the standard one. It is not only very misleading in itself, but it precluded him from adequately exploring the emotional intensity which went into the writing of Keynes's *Economic Consequences of the Peace*, with its savage condemnation of Lloyd George.

The bulk of Harrod's "discretions" are plainly prompted by his embarrassment at Keynes's link with Bloomsbury. He found little to admire in the circle's sense of humour, its detachment from ordinary communal concerns, its ethical values, all of which seemed to him an inadequate basis on which to build his hero's public achievements.

So he either suppressed the Bloomsbury side of Keynes wherever possible, or hurried on to the "main" Keynes, who left all this undergraduate nonsense behind him. Whereas the fascinating biographical task lies precisely in tracing the connection, and tension, between Keynes's aesthetic and managerial values.

Enough has been said, I think, to show that discretion on the scale practised by Harrod is the death of good biography, and good history. Moreover, it is hard to believe that governments would have for long resisted Keynesian theory on the ground that they disliked Keynes's personality.

Nevertheless, so deep-rooted is the feeling that our great public benefactors must have admirable private characters that Harrod's emendated treatment may have eased acceptance of Keynesian ideas. In this case his biography would have served its political purpose.

So biographers have a choice, after all: to tell the whole truth as they see it, or to tell as much of the truth as is compatible with doing good. Fortunately the decision becomes easier the longer ago one's subject lives. "Widows" pass away, and time rates all achievements at their proper worth. The biographer is free to become a historian, and to create something which may endure.

The author is professor of international studies at Warwick University.



## BOOKS

## A Cook's tour of slavery

by James L. Watson

Slavery and Social Death: a comparative study  
by Orlando Patterson  
Harvard University Press, £24.00  
ISBN 0 674 01082 1

Orlando Patterson is the author of numerous works on Caribbean society, including *The Sociology of Slavery: Jamaica 1655-1838*. The appearance of his new book will surely be welcomed by the international community of scholars who work on problems of slavery. Patterson clearly sees *Slavery and Social Death* as the successor to U. J. Nieboer's classic, *Slavery as an Industrial System* (1910). Both draw on a wide range of ethnographic sources and attempt to build models of slavery which are applicable to all societies, through time and space.

Although Patterson's book is lively, well-written and provocative it is unlikely to have a lasting impact on slavery studies. There are several reasons for this, not the least of which is a seriously flawed methodology. Much of the book reads like a catalogue of undigested ethnographic facts drawn from out-of-date anthropological sources. The author (a sociologist) relies heavily on Murdock's *Ethnographic Atlas*, a sample of 186 world societies which have been broken down and coded for the purposes of statistical analysis. Patterson also uses the Human Relations Area Files for many of his ethnographic examples. The problem with this approach is that the institution of slavery is presented in disjointed fashion, divorced from the cultural and ideological milieu of the societies involved.

The result can be rather disconcerting. For example, to illustrate a minor point on the incorporation of slaves, Patterson takes us on a world tour, covering (in six paragraphs) South American hunter-gatherers, "Gormanic peoples" of early medieval Europe, Anglo-Saxons, Caribbean plantation slaves, ancient Romans, hill peoples of Burma, Philippine horticulturalists, and no less than five tribal peoples in "traditional Africa". This is ethnographic overkill of a type long since abandoned by anthropologists. After hundreds of pages of similar accounts the reader begins to wonder if all this unsystematic, ahistorical leafpropping has accomplished anything other than filling up a book which is much too long for the ideas it contains.

Furthermore, Patterson is rarely critical of his sources; he accepts what the Human Relations Area Files present to him. Not surprisingly, some curious and seriously outmoded views have crept in. We learn, for instance, that the "cannibalistic Tupinamba of South America" eventually ate most of their captive slaves. Patterson appears to be totally unaware that reports of cannibalism such as the one he cites have become the subject of an intense debate among anthropologists in recent years. To find an old, and highly questionable, ethnographic account of cannibalism blandly reported as fact does not inspire confidence in the author's foray into social anthropology.

Patterson is at his best when he abandons the Cook's tour approach and focuses on specific examples or cases. His discussion of eunuchs, the "ultimate slaves", in Imperial China is one of the more interesting surveys of this problem available in the literature. Why are eunuchs, universally despised as filthy and corrupt beings, associated with divine rulers? Patterson draws on Mary Douglas's *Purity and Danger* to find his answer: notions of dirt and filth (eunuchs are plagued with problems of personal hygiene) are necessary to reaffirm what is pure and sacred in human societies. Among the Chinese, Patterson argues cogently, the "defilement" of the eunuchs was an essential aspect of their power. As the ultimate slaves, these deformed persons could mediate between ruler and ruled, male and female, good and evil, clean and unclean in the imperial court — no other being could perform this role so well. The author does carry his symbolic argument a bit too far, however, in that he does not point out

the other essential feature of eunuchry: they did not reproduce themselves and, hence, did not foster a line of descendants who might claim imperial privileges.

In his provocative introduction Patterson argues that slavery can be broken down into three "constituent elements": powerlessness, natal alienation, and dishonour. The book's theme is reflected in the author's claim that the distinctive attribute of slavery "was that it always originated (or was conceived of as having originated) as a substitute for death, usually violent death" (page 5). Slavery in this context is "social death" in lieu of physical death during war or execution for capital offences; it was not a pardon, as such, but a "conditional commutation". This is an interesting idea but it can hardly be accepted as a universal attribute of slavery, given that there are many systems of indentured slavery which did not originate in capture or in criminality.

Patterson's second constituent element, natal alienation, builds on his notion of substitute death. Slaves are, by definition, socially dead persons who lose all ties of birth in both ascending and descending generations. They are subject to a form of "secular excommunication" and become genealogical isolates. Slaves may develop close ties among themselves but such relationships are never recognized as binding or legitimate. This is the most promising aspect of Patterson's model and one that anthropologists might well pursue in their own research on problems of servitude.

The author's third constituent element of slavery is less convincing in that it deals with the psychology of the master-slave relationship. Slaves, Patterson informs us, "were always persons who had been dishonoured in a generalized way" (page 10). Because of their origins, slaves could have no public work and thereby stood outside the "game of honour". The concept of honour is extremely difficult to pin down, even in Mediterranean societies where it has been studied at length. Patterson makes the unwarranted assumption that a "sense of honour is present in all human societies". It is by no means clear that the Japanese samurai code equates with the

Mediterranean conception of honour, to say nothing of the subtle forms of social behaviour the Chinese refer to as "face". One fears that Patterson is building a very shabby construction when he singles out the notion of honour as a core element of slavery. Having taken his analysis this far, the author offers a definition: "Slavery is the permanent, violent domination of totally alienated and generally dishonoured persons" (page 13). Those who have attempted to produce definitions of slavery as a general institution will sympathize with Patterson because, in the end, everyone loses at this game. Slavery is, by its very nature, an extremely complex and elusive relationship of domination. Patterson's conceptions of social death and natal alienation are very useful and thought-provoking, but his preoccupation with honour seriously undermines the cross-cultural validity of his model.

Those familiar with the literature on slavery will notice immediately that the author has not included a reference to *property* in his definition. Patterson makes much of this omission and claims to have exercised the ghost of Marx from slavery studies. Marxist ideas regarding the alienation of labour are attacked on the grounds that it is impossible to distinguish between hiring services (labour) and acquiring rights over the whole body of the person hired. At this point in the book we are treated to an analysis of hiring practices in American professional baseball which, the author claims, shows how difficult it is to use Marxist models of alienation. What is the difference between Catfish Hunter (a pitcher for the New York Yankees) and Isaiah Butler (a South Carolina slave caught in the text)? Patterson argues that the difference cannot be found in notions of ownership or in control over labour as opposed to control over the whole person; rather the subjects differ in respect to the "relative power" they enjoy. We have obviously strayed into analytic quicksand.

The author claims that the propertors' rights are limited in both cases and that the crucial difference rests in the origins of the labourers. Only slaves enter the relationship as a substitute for death. Patterson's characterization of Marx (or what he takes to be



Lady Portsmouth and her black servant, a portrait by Mignard taken from James Watson's book *Slavery and the Slave Trade: a short illustrated history* (Macmillan, £14.00 and £5.95).

Marx's views on labour and alienation) is so muddled that it is difficult to follow. Furthermore, his use of bizarre comparisons (slaves and baseball players) cannot help the argument.

The book concludes with a discussion of slavery as a "relation of parasitism", a concept borrowed from sociology. Patterson argues that this approach gives him a special insight into servitude but there is little evidence to support such views in the text.

He has, quite simply, adopted a new, biological vocabulary to express old, sociological ideas regarding relationships of domination. In sum, *Slavery and Social Death* does not live up to

the inflated claims made on the flyleaf ("the first full-scale comparative study of the nature of slavery"). It contains many interesting insights, notably those relating to substitute death and natal alienation, but the text is marred by an uncritical use of anthropological sources and a disappointing, naive conclusion. This is not the modern successor to Nieboer's 1910 ethnographic classic; that study has yet to be written.

James L. Watson is lecturer in Asian anthropology at the School of Oriental and African Studies, University of London. He is editor of *Asian and African Systems of Slavery*.

## The losing tribes

Tribes of India: the struggle for survival

by Christoph von Fürer-Haimendorf  
with contributions by Michael York  
and Jayaprakash Rao  
University of California Press, £24.00  
ISBN 0 520 04315 4

In the 1980s the tribal people of the Adilabad district of Andhra Pradesh inhabited a land rich in forests, poor in communications and of little economic importance. As communications improved Hindu migrants moved into the forest areas to establish permanent farming settlements and trading enterprises. Much of the land they occupied, and to which they were subsequently given title, was fallow, having been left vacant by the tribals under their shifting cultivation method of production.

By the 1940s immigrants had acquired large areas and the tribals were in danger of losing all land. Their legal entitlement to it was very insecure. Under the *Shiva-Ijumbandi* system of cultivation the land remained government-owned and the tribals were allowed to cultivate it in exchange for a small amount of tax each year. This system provided corrupt officials with considerable opportunities to enrich themselves at the expense of the tribals. Affluent non-tribals who wanted land simply bribed the officials and the tribals were evicted.

Fürer-Haimendorf first studied this problem from 1939 to 1943 and wrote a series of reports on it to the Nizam of Hyderabad. On the basis of his recommendations, a policy of tribal rehabilitation

was embarked upon. This involved the solution of granting title deeds to tribal households. In spite of serious opposition from vested interests, the policy succeeded in securing title deeds for 85 per cent of tribal households by 1949. Considering that only 10 per cent had title deeds at the start of the programme in 1944, it was a great success.

This favourable situation continued until the late 1960s when a road link into the remote highlands brought an influx of Hindu settlers from Maharashtra. As a result large areas of forest were converted into paddy fields, many tribals had their land alienated and others were exploited by money lenders and merchants.

After his retirement from the chair of Asian anthropology at the University of London in 1976, Fürer-Haimendorf returned to India to undertake a systematic investigation of the social and economic changes affecting tribals by re-visiting areas he had first visited in the late 1930s and early 1940s. This book describes in depressing detail the fate of the tribals of Adilabad and other areas of Andhra Pradesh while he and his research associates worked. In addition to the fate of tribal land, he examines forest policy, economic development, the problem of education and the changes Hindu migration brought about in tribal beliefs and rituals. York and Rao have each contributed independent chapters outlining the fate of tribals in particular areas. Fürer-Haimendorf's central theme about the tribals' poor chances of survival in Andhra Pradesh is dramatically and grimly illustrated in a May 1981 postscript in which he describes how police massacred large numbers of tribals who gathered in the Adilabad district to protest about the alienation of their land and harassment by non-tribal exploiters.

A controversial feature of Fürer-Haimendorf's analysis, however, is the rather over-assertive distinction he draws between Hindus and tribals in order to make his case. Hindus are portrayed as the materially more advanced and

politically more powerful while tribals are shown as backward and politically weak. Thus Hindus are the exploiters and tribals the exploited, and his policy of protection follows as a logical consequence. The reality is rather more complicated.

For example, the forest areas of central India have sizeable minorities of Hindus who have lived with the tribals for hundreds of years. Many of these people have been exploited by outsiders in much the same way as tribals have. On the other hand not all tribals have been exploited. Some are quite well off. As for the immigrants, only a minority are rich merchants; most are poor landless people who are themselves engaged in a struggle for survival. Changes in the past years have reduced the economic condition of the tribals to one that is now indistinguishable from the vast majority of India's poor: they cultivate tiny scattered plots of land, they pull rickshaws, they work as daily labourers and they beg.

Fürer-Haimendorf is aware of these complexities. Indeed, these facts can be gleaned from his book, and York's chapter contains an excellent discussion on the problems of the tribecaste distinction. Fürer-Haimendorf defends his position by emphasizing differences in race, language and cultural factors such as religion. The question remains, then, whether the tribal problem should be analysed in the restricted terms of the tribecaste distinction or in more general economic terms such as, for example, "rich/poor" which puts the problem in the wider context of poverty in India as a whole.

Christopher Gregory  
Dr Gregory is a research fellow at Clare Hall, Cambridge.

## BOOKS

## Death of liberalism

Europe Transformed 1878-1919  
by Norman Stone  
Fontana, £3.50  
ISBN 0 00 634262 0

Covering the period from 1878 to 1919, this volume describes the "strange death" of European liberalism. Norman Stone begins with a synthesis of European political, economic and social developments treated from a comparative viewpoint and covering the whole period. He then devotes a section each to five major continental countries — Germany, Russia, Italy, France and Austria-Hungary — and to international relations, and concludes with chapters on the Great War and the postwar upheavals and the changing aspects of European culture after the turn of the century.

In many ways this is a book of its time. Right-thinking male Thatcherites will find much in it to reassure them. Free trade, laissez faire liberalism and the "nightwatchman state" appear in a favourable light. Bureaucracies, high tariffs and modern architecture do not enthusiasm, except in Russia where there were not enough of them to fulfil their function of saving capitalism from revolution. Liberalism seems successful so long as it is really individualistic and does not cost money. When liberals start to chafe in social engineering they are less warmly received. In Britain, as elsewhere in Europe, measures of redistributive taxation and social reform are seen as arousing "nightmares of the People's State, which would centralize the economy and reduce its citizens to an ant-hill". In general, it is the withering of sturdy individualism which catches Stone's eye. He tells us that by 1910 "huge armaments, monopolies, trade unions, and modern, high taxation and inflationary public finance marked the social scene". It is not a prospect he seems to find appealing.

Stone's preferences are open to criticism, but they can be defended and often make for a lively read. He is especially effective when describing the disastrous effects of imperialism or the prewar arms race. He is very good on the importance of confessional politics and the rise of Roman Catholic populist parties, whether in Ireland, Germany, Austria or Italy. After the Second World War historians' obsession with the socialist labour movement tended to put political Catholicism into the shade. Recently research interests have shifted, and Stone gives full weight to this welcome development. He is interesting too, on the problems faced by liberals in late nineteenth-century Europe, but his attempts to force the story of liberalism's decline into a series of coherent periods is not entirely convincing.

When Stone turns to individual countries he is best on Russia and Germany. Like many British historians, he is more critical of other people's conservatives than of his own. Russia is presented as a hopeless autocratic mess, and even when its political leaders do emerge they are antisemitic, rabid nationalists, woolly-minded revolutionaries or power-hungry monsters. The only Russian who seems to earn Stone's unstinting approval is the agronomist Chayanov, who knew the facts of the peasant question better than anyone else, and warned successive governments that there was nothing they could do about it. Intellectually honest, no doubt, but hardly very helpful. Nevertheless, Stone's picture of Russia does carry depressing conviction, and his discussion of the Stolypin land reform issue will be of value to students and teachers alike.

On Austria-Hungary he is more controversial. I was surprised to learn that "Vienna had received so many Slav immigrants that she was almost the capital of independent Czechoslovakia at the end of the First World War". There is a tendency to present the Austrian Empire's problems simply in terms of irresponsible nationalists. The Habsburgs on the other hand come out of it pretty well,

emerging as conscientious administrators, working for the common good. Their own dynastic ambitions and reactionary prejudices are rarely touched upon. The picture of Hungary on the eve of the First World War is clever but verges on caricature. Stone's account of the crisis which led to war is well handled, particularly with regard to the vexed question of mobilization arrangements in Russia and the Central Powers. On the war itself he makes some plausible generalizations about trench warfare. He is well qualified to describe the collapse of the Russian Empire and the victory of the Bolsheviks. His account of the German revolution, on the other hand, is less profound, and marred by factual error. Chancellor Michaelis was not "aged"; there was no "Spartacist" rising in December 1918; Eisner's government was not communist; Georg Heim was not the leader of the Bavarian Peasant League and German soldiers' councils were not quite so subservient to the High Command as Stone seems to imagine.

To write a description of this period which is arresting and witty, but yet clear and informative for an uninitiated reader is very difficult. Stone at least deserves marks for trying. But some times the pace of his narrative is so rapid it might confuse a reader unversed in the matters under discussion, and occasionally one wonders whether common sense is not being sacrificed to aphorism.

A. J. Nicholls

A. J. Nicholls is a fellow of St Antony's College, Oxford.

## Mein host?

Exile Politics during the Second World War: the German Social Democrats in Britain.  
by Anthony Glees  
Oxford University Press, £17.50  
ISBN 0 19 821893 1

The disastrous performance of the German Social Democratic Party in the election of March 1983 has underlined the difficulties that the party has been labouring under in the recent past. Perhaps not surprisingly, present difficulties have coincided with a great increase in interest in the SPD's past. One hitherto neglected area, the performance of executive committee of the SPD in its London exile is examined in this book by Dr Anthony Glees.

Previous studies of the SPD in exile have been few and far between. Lewis Edinger's pioneering work in 1956 on German exile politics was necessarily based on a very restricted number of primary sources. Werner Röder had

access to a much wider range of German documents for his 1969 study, but Dr Glees is the first scholar to make full use of British primary sources. Without access to these sources other accounts told us something about the internal life of the SPD in exile, but not about its relationship with the two bodies that determined its fate in exile.

In looking at the relationship of the SPD with the Foreign Office and the Labour Party, Dr Glees is fairly critical of both these institutions. In the case of the Foreign Office Dr Glees argues that the relative neglect of the SPD by the important opportunity to influence foreign developments in Germany. He attributes this neglect to three main factors. First, after the summer of 1940 a growing anti-German mood replaced the earlier willingness to distinguish between Nazis and Germans, second and not surprisingly military victory, and hence the overwhelming importance of relations with Soviet Russia, meant that the views of the SPD were unwelcome if they offended the susceptibilities of the Soviet ally. Third, with a few honourable exceptions Foreign Office officials displayed a pretty consistent ignorance about the nuances of German exile politics and politicians.

While it is clear that it is possible to take a more sympathetic view of the Foreign Office than Dr Glees, it is difficult to demur from his view that the Labour Party treated its fellow socialists harshly. A major fascination of Dr Glees's work is the light it throws on the relationship between the SPD in exile and the Labour Party. This was the axial relationship, for it had been in response to overtures from the Labour Party that the SPD leadership and the Executive Committee had transferred the seat of the party executive from Paris to London. After some initial support for the exiles the Labour Party's attitude changed to one of grudging hostility and criticism. They were also prepared to do very little for the exile socialists in a material way. As a Briton, it is difficult not to feel some sense of shame at the treatment of the German socialist refugees by their British hosts. It is perhaps enough to report that an older member of the Labour Party justified to me the then behaviour of the Labour Party on the grounds that it compared very favourably with the way the Soviet communists had treated their German

man.

In his account Dr Glees dwells on the role of William Gillies, the international secretary of the party. Gillies argued that although the Labour Party would want to see German Social Democrats in power after the war, "they were to be the expression of British interests and not the expression of what the German people might or might not want". Not surprisingly, this was a view that the exile SPD could not accept, since they were determined to preserve the independence of the SPD in order to return to

Germany after the war and reestablish the party. If they had accepted it, they would have been seen by the German people merely as "agents" of the British occupation.

This book provides us with the basis for a re-evaluation of the exile experience. The originality of Dr Glees's approach is in his change of emphasis. Previous writers have emphasized the small contribution made by the SPD in exile to resistance against Nazism. Dr Glees is concerned not with their impact on the Nazi regime but with the implications of their stance for the postwar history of the party. His argument is that by staying in exile, the SPD were able to preserve their legitimacy. This enabled them to return to Germany and play a major role in the determination of SPD policies after 1945. Almost by accident, this book sheds a great deal of light on the vexed question of the German policy of the postwar Labour government. Many German historians agonize as to why the Labour government did so little to favour the cause of the SPD in the British zone. A careful reading of this book will indicate that no more could have been expected.

Dr Glees's book is well-written and persuasively argued. It represents a major contribution to our understanding both of the SPD and British policy, though its occasionally polemical tone is bound to engender controversy.

W. E. Paterson

W. E. Paterson is reader in politics at the University of Warwick.

## After the revolution

Red Petrograd: revolution in the factories 1917-18  
by S. A. Smith  
Cambridge University Press, £25.00  
ISBN 0 521 24759 4  
Kronstadt 1917-1921: the fate of a Soviet democracy  
by Israel Getzler  
Cambridge University Press, £25.00  
ISBN 0 521 24479 X

Inflated expectations and bitter disillusionment are the stuff of any "honey-moon of revolution" but perhaps never more so than in Russia after 1917.

Following the fortunes of the proletariat of the Russian capital, notably workers' ambitions for grassroots industrial democracy, *Red Petrograd* concludes that partly by Bolshevik design but primarily through supranational economic and social currents against which the new Bolshevik government was helpless, the high hopes of early 1917 had been exploded as soon as mid 1918. *Kronstadt* chronicles the transformation of the headquarters of the Russian Baltic fleet from virtui-

ly a military prison colony — the "sailors' Sakhalin" — into "the brightest example of the democratic principle in the Russian Revolution". By this reading, the celebrated Kronstadt Rising of 1921 was less a sudden spasm of guilt on the part of the Bolsheviks' erstwhile most zealous supporters than a last doomed demonstration of that commitment to "a forgotten golden age of Soviet democracy" which had its brief heyday in 1917.

The composite picture of Russia in 1917 which emerges from these complementary studies presents many fascinating features. In both the industrial and military spheres, the February Revolution which brought down tsarism marked not a crisis of stagnation or decadence but a crisis of modernization, particularly of disruptive practicality. Like the fight to keep threatened jobs, was it least as influential a factor as ideological passion in the complex interplay of revolutionary politics over 1917. Moreover, far from instinctively embracing Bolshevik leadership and policy, the workers and sailors quickly developed their own distinctive vehicles for carrying forward the revolution; the Petrograd proletariat favoured its "factory committees"; Kronstadt was devoted to its own exuberant brand of "Anchor Square democracy"; and to the "soviet" as the building-block of socialism. Even so, despite their multiplied role in the eventual suppression of the unrealizable dreams of 1917, the Bolsheviks who figure on the sidelines of both studies do not feature as villains in the drama. Although the Bolsheviks undoubtedly exploited the post-tsarist *mélée* infinitely more adroitly than their political rivals, they are portrayed as not so much unscrupulous as naïve, unaware until too late of the vast scale of the enterprise they had set themselves and typically the prisoners rather than the masters of events.

Both studies are conspicuously conscientious and professional — the kind of western scholarship that Soviet historians have come to call *solidarity*, a code word meaning too well researched to be lightly dismissed but departing too far from the official line to receive their seal of approval. Smith's painstaking analysis is buttressed by an admirably international and interdisciplinary range of reference. Getzler's account is structurally flawed by an (acknowledged) unevenness in the availability of primary evidence but is more satisfying dramatically. Some maps would have been most welcome.

Not just to relieve texts which are necessarily closely-argued and stylistically dense but to provide essential geographical orientation, line maps in *Red Petrograd* and of Kolbin Island and its setting in the Gulf of Finland in *Kronstadt* would have been more than helpful.

Making few concessions to the more general reader, these are unashamedly specialist monographs, even though the implications of their findings will surely find their way into future popular accounts of the Russian Revolution. At the level of methodology, the geographically narrow confines of the studies raise important questions about historical generalization. Russia was not Petrograd, all less Kronstadt, and the degree to which a close investigation of a particular locality (especially one recognizably untypical of the whole) contributes to a balanced evaluation of the broader national experience is plainly an issue which all historians must resolve in their search for an overall interpretation.

East and West, the received images of the Bolshevik Revolution are commonly still Soviet-inspired mythology. The Petrograd proletariat may be observed swarming to a man under resolute Bolshevik leadership over the wrought-iron gates of the Winter Palace in Eisenstein's *October*. The Kronstadt sailors who plunged into the sea were hailed by Lenin himself as the pride and glory of the Russian Revolution. Yet what is abundantly clear from these latest studies is that Petrograd and Kronstadt were not the Bolshevik bastions of Soviet legend. "Red" in the sense of being almost innocently radical they certainly were; exclusively or fanatically "Bolshevik" they were not. The western demystification of the Russian Revolution continues apace.

Raymond Pearson

Raymond Pearson is senior lecturer in history at the New University of Ulster.



# BOOKS

## Upland landscape

High Dartmoor: land and people  
by Eric Hemery  
Robert Hale, £50.00  
ISBN 0 7091 8859 5

Typical interest in the genesis, development and future of the landscapes of upland Britain has been underlined by press coverage of recent land use conflicts in our upland National Parks and the "upland debate" currently being promoted around the regions by the Countryside Commission in a style more frequently associated with the launch of a new commercial or political product.

Popular images of Britain's high uplands have traditionally emphasized the prominence of desolate wilderness and climatologically inhospitable tracts of unproductive moorland or bare rock. Although many accept them as areas of great scenic beauty and ecological importance, few would recognize the importance and variety of human imprint on these areas. This weighty tome, however, eloquently portrays for one such upland the landscape detail so often undetected. Even if that detail is seen either the significance is often missed or an explanation may be lacking.

The book is an immense collection of information about Dartmoor above the limit of agricultural enclosure. Many years of careful observation, in which literally almost no stone is left unturned or unmeasured, diligent notation of descriptive minutiae in field notebooks, conversation with the "moorfolk" and additional historical research has produced a unique personal record of a landscape many of the intricate facets of which would otherwise have remained a mystery.

Unfortunately, however, the organization of this information demands the utmost stamina on the part of the reader. Hemery divides the region by river valleys and their tributaries and calls such units "counties". Twenty-six such areas, which geographers would recognize more clearly as catchments, are described in three parts: south Dartmoor; central, east and the Dart tributary sector of south-east Dartmoor; and north-east, north and west Dartmoor. The pattern of delivery proceeds with rather monotonous regularity: first, the upper valley sides, crests and tributaries, then the lower valley sides and floor. This generally downstream direction is the opposite of that which most visitors would tend to take.

Even to those already initiated in the Dartmoor landscape the lack of Ordnance Survey grid references makes precise identification of some of the geographical and cultural features difficult. I would have much preferred to see a historical or thematic approach to the whole work, as this might have removed certain repetition and might have enabled the author to portray more clearly the sequence of events which have transformed or subtly modified the landscape.

There is a certain uneasiness in the documentation of physical landscape development and the compression of an outline "history" of the region into just four text pages is inexplicable. Definition of weathering as the "wearing away" of rock by climatic elements might cause a few hackles to rise in geographical circles. If it is true that "extreme ground saturation" causes the rapid decomposition of grasses and heaths, then we should all puzzle over the presence of such deep peat on the high tablelands of Dartmoor. I hope no one will take up the suggestion of eating young bracken shoots, cooked asparagus-style in view of the recent evidence for *Peridium* containing potentially carcinogenic substances. The glossary in which these examples occur is a curious collection of terms supported by a mixture of notes and narrative, science and reminiscence. Its location in pages 12-97 is guaranteed to confuse or irritate the reader by introducing material without any logical framework.

Researchers will find the bibliography very limited; and many references, noted in the text are not listed. However, the book is supported by 551

illustrations. Many are unique human scenes which provide clear encapsulations of life and social organization in well selected historic frames; some are landscapes which are usefully reprinted with place-names and other annotations; and others such as the pair which show the Whitehouse peat pass in 1955 and again in 1975 provide an invaluable record of recent landscape change. However, all are black and white and it is a pity that the character of the moorland landscape could not continue some colour representation in a volume at this price.

Hemery alerts us initially that his contribution is not a guide nor a skillful or scientific answer to controversial problems but a "plain view" of High Dartmoor's land and people. In many respects this is the excuse for self-indulgence and copious asides, footnotes and anecdotes, many of which are trite and superfluous; but it also provides an opportunity for argument. The author argues with other writers on their interpretations, with the Ordnance Survey on the accuracy of their place-names and, overall, with those who think they know the upland. For this last challenge alone, I am grateful for this long-overdue addition to the literature.

Edward Maltby

Edward Maltby is lecturer in geography at the University of Exeter.

## Defining valid domains

Philosophy and Human Geography: an Introduction to contemporary approaches  
by R. J. Johnston  
Edward Arnold, £5.50  
ISBN 0 7131 6385 2

Relevance and Ethics in Geography  
by Bruce Mitchell and Diane Draper  
Longman, £12.95  
ISBN 0 582 30035 5

The appearance of these two volumes is indicative of the continuing debate within geography concerning the nature of the subject, what its practitioners can hope to achieve, and the means of inquiry at their disposal. However, the two books are in stark contrast.

Ron Johnston's *Philosophy and Human Geography* is written in a refreshingly direct and unpretentious style, the author succeeding admirably in communicating some very complex matters. In doing so he helps the reader to see some of the arcane and obscure literature with a disconcerting clarity. He has written his book explicitly for undergraduates, and primarily for those reading geography. Furthermore, he refrains from arguing the merits of one philosophical position in competition with others, and has succeeded in offering the reader a remarkably balanced account of widely divergent viewpoints - although he deliberately plants clues regarding his predilections.

The problem addressed is the nature of science, of knowing, in the domain loosely defined as social science, of which human geography is but one discipline. Quite explicitly, the author discusses physical geography. At one level, this is acceptable. In that recent methodological and philosophical debate within the subject has focused on human geography and has been fed largely by inputs from outside the discipline. In another sense, the separation is unfortunate, because here the 1950s and 1960s important advances were occurring in physical geography which spilled over into human geography, and the connecting cords have not been severed despite the "revolution" which many consider has since been experienced.

Within his self-imposed limits, Professor Johnston adopts a simple strategy, in which three chapters form the core of the book. These discuss positivist, humanist and structuralist approaches. Each chapter is divided into two main parts: an exposition of the philosophical viewpoint; and a brief review of geographical literature that is cast in the particular philosophical mould. The order of the chapters is determined primarily by the

author's assessment of the importance of each philosophical tradition in human geography, progressing from the more to the less important, importance being defined in terms of the volume of geographical literature and general impact on the discipline. Although clearly this is a subjective matter, I believe that Professor Johnston has got the balance about right.

An easy gambit is to set up the logical positivist mode of thought and treat it as an Aunt Sally. As Johnston points out, strict logical positivists claim not only to have a method of science but that it is the only one that is valid. The second claim cannot be sustained but this is not a reason for rejecting positivist modes of thinking, a mistake made by some others. And, as the review of geographical literature shows, positivist science has made an impressive contribution to geography, much of it in terms of aggregate analyses and much of it in economic geography.

In turning to humanistic approaches, there is a disconcerting change of scale, from aggregate studies to the examination of individual people. The subjective mould of human imagination and perception has a real impact on behaviour and decisions. Consequently, actual behaviour in the spatial domain cannot be understood only by reference to the "objective" external environment, which in any case is subject to the agency of man, who creates desired space. Historical geographers in particular have grappled with these problems as they try to re-create the geography of past times and what it was like to inhabit and create those geographies.

Some are not content even with these complexities and wish to pursue the deeper structures which lie, unseen and unseeable, below the surfaces that are conventionally examined. This Holy Grail leads to an exegesis of Lévi-Strauss and Marxist thinking, the reproduction of modes of production, class struggle, uneven development, and so on. This is a field of inquiry which has attracted some eminent writers, but which also puts off many other scholars because the arguments are "not verifiable/falsifiable against evidence in the positivist sense".

In effect, both the humanist and structuralist approaches amount to a critique of the positivist mode of thought. To the extent that this critique serves to mark out the domain within which the positivist approach is valid, so far does it serve a useful purpose. By the same token, the utility of the competing philosophies and the domains for which they are relevant can be teased out. Although this much is made reasonably explicit by the author, the full implication is not stated. Indeed, we are left with a supposed dilemma: either, to choose one or other philosophical approach; or, fashion an amalgam.

This is an unnecessary dilemma. If we are explicit about the purpose of a particular inquiry, then the appropriate framework within which to work can be selected. The touchstone is whether that particular approach makes a useful contribution that is recognized by other scholars, which in turn implies communicating across substantial barriers of concept and terminology. Johnston implies that he shares this viewpoint, advanced by me in *Human Geography: evolution or revolution?* (Penguin, 1975).

Despite the fact that the text is marred by numerous typographical errors, Johnston's book deserves a wide readership among geographers - both students and teachers - and among those who are curious to know what it is that geographers do. For its brevity, width of coverage and clarity it is a brilliant book - a worthy companion in the author's earlier work *Geography and Geographers: Anglo-American human geography since 1945*, a second edition of which has recently been published by Edward Arnold.

Notwithstanding the title of their book, Bruce Mitchell and Diane Draper are primarily interested in ethics, which they summarily define as "the study of standards of right or wrong, or the part of science involving moral conduct, duty, and judgment". Their text is a pedestrian collation of statements and studies revolving around problems of respondents' privacy; deception on the part of the investigator; the conflicting claims on a scientist as a "pure" scientist, consultant or advocate; and so on. Miraculously, the text is written as though the medical profes-



Heage Windmill in the village of Heage near Derby. Taken from *Transformation of a Valley: the Derbyshire Derwent* by Brian Cooper with photographs by Neville Cooper, published by Heinemann at £13.50.

tion hardly existed - the six entries in the index all referring to comments in passing - wrestling with all the ethical problems so admirably discussed by G. B. Shaw in *The Doctor's Dilemma*. I think this is a book that deserves to be quickly forgotten.

Michael Chisholm

Michael Chisholm is professor of geography at the University of Cambridge.

## Recreation tree

Recreation Geography  
by Stephen L. Smith  
Longman, £5.95  
ISBN 0 582 30050 9

The professional interest in recreation taken by geographers soared during the 1960s and 1970s and so we can now expect to see some synthesis of the methods and results used during those years.

Dr Smith is primarily concerned with methods, and this comes out clearly in his chapter headings which, apart from "conclusions" consist of four pairs of sections on recreation location and on travel entitled successively "descriptive research", "explanatory research", "predictive research", and "normative research". Thus the book's great strength lies in its close attention to, and detailed review of, recent research methods used to investigate the geography of recreation which forms the bulk of the volume.

In the work on choice in travel, for example, we are told in detail how to use the Fishbein model (which is a subjective choice model), for destination choice, as well as the Wennersten and Neilsen model as an example of an objective model of predilection. Similarly, the relevance of central place theory is explored in some detail in the chapter concerned with predictive research on location, a section which even discusses the distribution of the triangle of Hurrods, thus putting the shopping there firmly in the camp of hedonism, rather than utility. One problem with discussing so many methods, however, is that each is usually illustrated with a single example and we are left to wonder whether that particular technique was ever used again or whether it became a staple item for applied practitioners of the subject.

Ian Simmons

Ian Simmons is professor of geography at the University of Durham.

# BOOKS

## Over the hill

Adult Cognition: an experimental psychology of human aging  
by T. A. Salthouse  
Springer, DM62  
ISBN 2 540 90728 9

Soon 20 per cent of the population of western Europe and of North America will be aged over 60 years. Psychologists and book publishers being among the first professional groups to take the statistic to heart, there has been a flood of two sorts of books on aging. Jolly hortatory paperbacks offer advice on self-evident problems and seek to convince us that the predicaments of aging are more funny than desperate. Alternatively, solemn textbooks review on unimaginative, self-contradictory and unsatisfactory technical literature seeking by diligent coverage and sheer mass to disguise the fact that few useful or interesting conclusions are yet available.

Timothy Salthouse's book avoids both these traps. He deals, chapter by chapter, with large and interesting topics. For example, his first chapter gives us the bad news about professional achievement, especially academic achievement, and age, which has been accumulating since the 1950s. It is especially sad for *THEES* to report to its more distinguished readers that we must all, inevitably, go over the hill - and that the peak of the hill apparently occurs much earlier than most of us would like to believe.

The patient and exact H. C. Lehman published in the 1950s tables that show that mathematicians and chemists reach their peak productivity (peer-judged quality, as well as sheer quantity of publications) in their early thirties, and decline sharply thereafter. Curiously astronomers are much luckier, beginning much later and peaking - with composers of German grand opera, German men of letters and historians - in their early fifties. Chess players and psychologists peak in their middle-fifties. Embarrassingly, psychologists have two publication peaks: although they produce their best papers in their thirties, they go on strenuously producing "lesser publications" in their late forties and fifties. And although Nobel laureates are awarded rather late in life, the work which earns them is usually completed in the recipient's thirties and early forties.

As Salthouse points out, further work has not upheld any of the obvious objections to Lehman's conclusions. We do not understand these phenomena, but the statistics are obdurate - and intriguing. For example, what factors have to achieve until late in life, even though in other subjects later achievements are rare? What can we learn from individuals who provide striking exceptions to these rules? Is diminishing productivity only the result of loss of mental efficiency and of energy, or can much of it be explained by the distractions of other kinds of responsibility as middle age proceeds?

Salthouse's sequel chapters on methodological difficulties in aging research partly explain why such questions have yet to find adequate answers. They gently mock the point that gerontologists, and those who fund them, must accept the studies of cognitive changes with increasing age can only be useful if they are longitudinal - that is, if they follow some people as they age over periods of a decade or longer.

Salthouse gives a sensible account of the literature on health factors and aging. He briefly examines the idea that old age can be considered, and perhaps alleviated, as a disease. He rightly complains of the lack of adequate theories of aging and aptly points out that even the slender data we have will be very hard to interpret until this situation is remedied. For the moment it seems better to replace the idea of "aging" as a single process, looked solely at the mere passage of time, with other ideas as to the joint and separate effects of variables associated with increasing age - such as diseases of the respiratory and circulatory systems, brain damage, and the onset of illness

resulting in death. Salthouse correctly emphasizes that the conditions of being either 20 or 80 years of age in 1983 differ in many other respects than gross physiology. A person aged 80 was born before World War I, grew up in a very different intellectual and economic climate, had different educational opportunities, different medical treatment and a different diet, and focused his or her life in terms of very different expectations. We are all time travellers, but the elderly are furthest from home and suffer most from culture shock. Their experience allows them to retain high levels of competence at some practised skills - many, perhaps, now obsolete in terms of their daily usefulness. Their competence in learning new skills, or in dealing with a changing world is quite another question.

Traditional intelligence tests also emphasize this necessary distinction between specific, learned, skills and general flexibility. Particular skills, such as verbal competence, are retained until the end of life. Information mastered in youth may survive and remain useful. But all tasks involving fast performance, and many, novel, spatial problem-solving tasks show marked loss. The picture is perhaps most neatly captured by a distinction between the retention of some "crystallized" intellectual skills, dependent on early learning, with a concomitant loss of "fluid" intelligence which allows the appreciation and solution of novel problems.

In short there is little in this book which will offer hope to an academic introspectively poised on the brink of early retirement. However, academics facing such hard choices will at least appreciate the clarity with which issues are raised, the rigour (but not, perhaps, the frequent inaccuracy) with which the literature is criticized, and the evident determination to clear the way for useful progress in this sad, but necessary, science.

Patrick Rabbit

Patrick Rabbit is professor of psychology at the University of Durham.

## Numerical analysis

Computational Methods in Elementary Numerical Analysis  
by John L. Morris  
Wiley, £17.50 and £9.95  
ISBN 0 471 10419 1 and 10420 5  
The Essentials of Numerical Computation  
by C. M. Bartholomew-Diggs  
Chertwell-Bratt, £7.95  
ISBN 91 44 20281 4

Numerical analysis has been a controversial subject during its relatively short existence, so much so that even experts cannot agree on exactly what it is. A description that I particularly like, however, is that of Hildebrand: "The ultimate aim of the field of numerical analysis is to provide convenient methods for obtaining useful solutions to mathematical problems and for extracting useful information from available solutions which are not expressed in tractable forms".

There has been considerable argument as to whether numerical analysis should be taught to undergraduates or postgraduates, mathematicians or non-mathematicians, in universities or polytechnics or schools, with or without practical computation, or not at all. Some "numerical analysis" would not recognize a number if they saw one and we have at least one chair in "applied numerical analysis" in this country. On the other hand the importance of the subject to a wide range of human activities must be recognized, especially in view of increased development in computers.

Despite the fact that we still have only a few MSc courses and probably no undergraduate courses devoted exclusively to numerical analysis there are clear signs that the subject is gaining in popularity and is being offered as a component of, or option in, an increasing number of courses. These two books are aimed at the undergraduate side of this activity. Both books follow closely the classical pattern, with chapters (or sections) on errors in numerical computation, solution of linear equations, interpolation, least squares approxima-



The Herefordshire Beacon, Colwall, Hereford and Worcester, an Iron Age hill-fort. Taken from *Roman Britain from the Air* by S. S. Freer and J. K. S. St Joseph, published by Cambridge University Press at £15.00.

tion, minimax approximation, numerical integration, numerical differentiation, solution of nonlinear algebraic equations, the algebraic eigenvalue problem, and the numerical solution of ordinary differential equations. The second book also has a chapter on numerical optimization. Neither book ventures into the more difficult area of partial differential equations.

Morris's book provides a well-written, up-to-date, introductory course in numerical analysis, mainly at first-year level but going beyond this in some areas, such as minimax approximation and eigenvalue problems, and so leading nicely into more advanced topics. A range of interesting physical problems is also given in chapter one. The criticism is also given in chapter one, a chapter on errors in computing is very good and has some useful examples. Though mainly enlivened by more modern topics, such as iterative methods for sparse linear systems, spline approximations and Chebyshev methods, the Q.D. algorithm. The chapter on numerical differentiation is very short and contains no numerical examples and the chapters on eigenvalue problems and numerical differentiation perhaps suffer from attempting to cram too much material in too little space.

Readers must have some knowledge of mathematics, especially calculus and linear algebra, and to be able to programme in a language such as Fortran, Pascal or Algol. A minor criticism is that proofs of theorems are given or not at random. The examples and exercises throughout the book are used to complement the text; consequently answers to the exercises would have been useful.

Although Bartholomew-Diggs's book deals with much the same subject-matter, apart from the chapter on optimization, the treatment is very different. The objective here is to give undergraduates an "introduction to the use of computers for nontrivial numerical calculations" so that they will be able to select the right method from existing numerical software libraries. Intended as a preliminary to more advanced work, it is claimed that the book will serve an undergraduate throughout his degree course. As it is not intended to be on numerical analysis, there is no mathematics. There are, however, many exercises involving programming, but no explicit programming language is mentioned, and rather ill-defined techniques are given to illustrate the techniques. A number of the more recent developments are introduced as exercises only; again answers would have been useful.

Because of the lack of mathematics, the book tends to read like a collection of recipes for the various methods. I found the chapter on errors rather suspect and could not always match the author's numbers with my own. The book suffers from having no diagrams

and no index and the printing is the worst I have ever come across. Regarding the book's objectives I know of no engineering, mathematics or science course for which it would be suitable and so it must be said to fail in its stated aims. I did quite enjoy reading the book, however, and it may well not be without merit as a "popular" work on computing techniques.

Colin Storey

Colin Storey is professor of mathematics at Loughborough University of Technology.

## Secondary pathways

Natural Product Chemistry: a mechanistic and biosynthetic approach to secondary metabolism  
by Kurt B. G. Torsell  
Wiley, £23.00 and £9.50  
ISBN 0 471 10378 0 and 10379 9

Man has always used natural products: initially in the form of crude plant extracts which were valued for their poisonous, medicinal, or hallucinogenic properties; and more recently in pure form as components of proprietary medicines. Consider also perfumes of natural origin, and culinary herbs and spices, all in use for many centuries, and the list of natural products in the service of man becomes very extensive.

Scientific study of these chemical compounds began in earnest during the nineteenth century, but was primarily concerned with isolation and the elucidation of structure. These monumental efforts, carried out with primitive equipment and without the benefit of spectroscopic methods, produced definitive structures for most of the simpler terpenes and alkaloids, and chemical syntheses were then attempted. Progress was at first painfully slow - the elucidation of the structure of cholesterol (readily available in gallstones) took 40 years (1882 to 1932), and the first synthesis was not accomplished until 1951.

However, during the past 25 years, the use of increasingly powerful spectroscopic techniques has greatly facilitated structural investigations, and in consequence thousands of natural products have been isolated, identified, and then synthesized. This quickening pace of this research has provided an additional bonus in the form of an amazing number of new synthetic methods and novel chemical theories, and these have had a very considerable impact on organic chemistry in general.

In addition to these structural and synthetic studies, the biosynthesis of natural products could be studied once radio-isotopes, and more recently, stable isotopes like carbon-13 became available, and this new area of endeavour has commended the attention of an increasing number of chemists and biochemists. The pathways by which natural products (or secondary metabolites) are produced constitute "secondary metabolism". The term "secondary" originally implied that the pathways (and the compounds thus produced) were apparently unessential, as compared with the metabolic pathways for the production of carbohydrates, proteins and nucleic acids (primary metabolism), which are an essential part of all living organisms. Whether secondary metabolites are in fact non-essential is now open to debate, but certainly one of the strongest lines of natural products has always been their interesting pharmacological and toxicological properties, and more recently their roles as mediators of "chemical communication" between organisms, that is, their ecological significance.

Not surprisingly, modern books on natural products fall into two main classes: synthesis and biosynthesis; and Professor Torsell's book deals with the latter subject. Although it is primarily concerned with the organic reaction mechanisms by which natural products are assembled, certain aspects of primary metabolism are also included. In this respect it is rather similar to the excellent, but now rather dated book *Basic Organic Chemistry*, Part IV by Tedder, Neevala, Murray and Carnduff (Wiley, 1972), and I suspect it may be intended as a replacement for that book.

The scope is somewhat broader than two other recent books: *The Biosynthesis of Secondary Metabolites* by R. B. Herbert (Chapman & Hall, 1981) and my own book *Secondary Metabolism* (Oxford University Press, 1980), considerable emphasis being given to carbohydrates and to those enzymes (and their cofactors) which catalyze the biosynthetic reactions. In common with these other books, all classes of natural products are considered, with the elucidation of biosynthetic pathways by means of isotopically-labelled intermediates providing the major theme. The coverage is comprehensive although there are a number of important omissions (aflatoxins, vitamin D metabolites, macrolide antibiotics, cannabinoids, and so on), and the clarity of the chemical structures and figures is excellent.

My one reservation is that there is too little mention of the biological properties of natural products. On the last page Professor Torsell mentions that many of our drugs are natural products or related to them, but this is probably too late to capture the interest of the reader; and there are very few specific examples elsewhere in the book. In addition, the "chemical communication" (including "chemical warfare") that takes place between insects, insects and plants, and between plants, is given a brief mention only in the first chapter.

This is a pity, as this area of research is currently very much in vogue, and many secondary metabolites are now known to be of vital importance to the organisms that produce them. Indeed, the continuing existence of species may depend on their ability to elaborate on existing secondary metabolites and thus increase their competitiveness. There are all kinds of reasons why chemists should be interested in the biological activities of natural products, and this otherwise excellent book might have been greatly enriched if this aspect had received more attention.

John Mann

John Mann is lecturer in organic chemistry at the University of Reading.

A second edition of J. M. K. Dake's *Engineering Hydraulics* has been published by Macmillan at £15.00 and £7.50.

Ellis Horwood (Wiley), in association with the Laboratory of the Government Chemist, has published *Chemical Nomenclature Usage*, edited by Ronald Lees and Arthur F. Smith. Designed as a guide to the correct use of chemical names, the work explains the legal and technical reasons for the variety of names assigned to chemicals and the role of international bodies concerned with the standardization of nomenclature. The guide is available at £19.50.







## Universities continued

UNIVERSITY OF STRATHCLYDE  
LECTURESHIPS  
IN LAW SCHOOL

Applications are invited for two lectureships in the Law School, from candidates with suitable qualifications in law. Professional or academic experience in law is desirable; preference will be given to candidates with active research interests. Applicants from all areas of law will be considered, but preference will be given to those with interests in Business Law.

Salary on the scale for lecturers (£7,190-£14,125 pa), with initial placing according to age, qualifications and experience. USS superannuation benefit.

Applications (two copies), including a full curriculum vitae and the names and addresses of three referees quoting reference 42/83 should be lodged with the Academic Staff Office, University of Strathclyde, McCance Building, 18 Richmond Street, Glasgow G1 1XQ as soon as possible and no later than 29th July, 1983.



## Research Associate

A social or behavioural scientist, with previous research experience, is required for an SERC funded project investigating the relationships between planners and the management in the construction industry. Applicants should be familiar with interviewing and the design of interviewing schedules. The successful applicant must be prepared to spend extended periods at various sites being researched.

The appointment is for up to twenty-one months, depending on date of appointment. The post carries a salary of up to £10,250 per annum. For further details and application forms, write to the Administrative Assistant, Department of Management Studies, Loughborough, Leicestershire.

Please mention **THE TIMES** when replying to advertisements

UNIVERSITY OF STRATHCLYDE  
LECTURESHIP IN SHIP  
AND MARINE TECHNOLOGY

Applications are invited for a lectureship in Marine Technology in the Department of Ship and Marine Technology. Candidates should have an Honours Degree in Naval Architecture, Marine Technology, or a related engineering discipline. The lecturer will be required to contribute to an active research programme and to enhance industrial links, as well as to teach at undergraduate and postgraduate levels.

Salary on the scale for lecturers (£7,190-£14,125 pa), with initial placing according to age, qualifications and experience. USS superannuation benefit.

Applications (two copies), including a full curriculum vitae and the names and addresses of three referees quoting reference 40/83 should be lodged with the Academic Staff Office, University of Strathclyde, McCance Building, 18 Richmond Street, Glasgow G1 1XQ as soon as possible and no later than 29 July, 1983.

UNIVERSITY OF STRATHCLYDE  
DIRECTOR:  
RESEARCH AND  
DEVELOPMENT SERVICES

Applications are invited from suitably qualified and experienced persons for the post of Director concerned with the promotion of collaboration between the University and industry and commerce, and with the application and development of the research being conducted in the University.

The Director will be a senior officer of the University and the salary will be at professional level (£18,000-£22,000 per annum).

Further particulars are obtainable from the Registrar, University of Strathclyde, McCance Building, 18 Richmond Street, Glasgow G1 1XQ. Applications including curriculum vitae and the names and addresses of three referees, must reach the Registrar at the above address before 5 August, 1983. Please quote reference 39/83.

UNIVERSITY OF STRATHCLYDE  
Department of Marketing-Elliott Ltd  
Marketing Teaching CompanyPART-TIME LECTURESHIP IN MARKETING  
(Two Year Appointment)

Applications are invited for a two year part-time (20%) Lectureship (suitable for two years) in the Department of Marketing. Candidates should have a good honours degree or equivalent in Marketing or other cognate subject, and should also have relevant industrial experience. Appointment will be on the full-time scale with remuneration in the range £3,475-£4,475 (60% of the full-time scale) with placing according to age, qualifications and experience.

Further details are available from the Academic Staff Office, University of Strathclyde, McCance Building, 18 Richmond Street, Glasgow G1 1XQ. Applications (two copies) together with full curriculum vitae and the names and addresses of three referees should be lodged with the Academic Staff Office by 29th July, 1983. Please quote reference 38/83.

DEPARTMENT OF PHYSICS  
LECTURER

In the Department of Physics

Candidates should have research experience in the theory of condensed matter.

Salary scale £7,190-£14,125 per annum. The initial salary will depend on qualifications and experience. Further particulars may be obtained from:

D. A. S. Copland, Staffing Department, University of Southampton, Southampton SO9 5NH, to whom applications (seven copies from UK applicants) should be sent not later than 29th July quoting reference 181/ATHE.

University of Cambridge  
TEACHING  
FELLOWSHIP IN  
DEFENCE STUDIES  
IN THE FACULTY  
OF HISTORY

The Faculty Board of History invite applications for a Senior Research Associateship in the Department of History, University of Cambridge, to take up on 1 October 1983 or as soon as possible thereafter. The successful candidate will be expected to teach and supervise students in the Department of History.

Applicants will be expected to have research experience in the history of modern war or strategic studies and the person appointed to undertake teaching and supervising students in the Department of History.

The stipend for Senior Research Associateships is not fixed but will be in the range £7,190-£14,125 per annum. Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

University of Liverpool  
Department of Statistics and  
Computational Mathematics  
TEMPORARY  
LECTURER IN  
STATISTICS

Applications are invited for the above post which is available for a period of one year from 1st October 1983. The successful candidate will have a postgraduate qualification in statistics or equivalent experience in the field of statistics or demonstrating an understanding of statistical theory and practice at a level equivalent to that of a postgraduate student.

Applications (two copies) should be sent to the Registrar, University of Liverpool, 695 Chester Road, Liverpool L69 3GB, by 29th July 1983. Salary scale £7,190-£14,125 per annum.

Further particulars may be obtained from: D. A. S. Copland, Staffing Department, University of Southampton, Southampton SO9 5NH, to whom applications (seven copies from UK applicants) should be sent not later than 29th July quoting reference 181/ATHE.

University of London  
Imperial College of  
Science & Technology  
LECTURESHIP IN  
ATMOSPHERIC  
PHYSICS

Applications are invited for a lectureship in Atmospheric Physics. The successful candidate will be expected to teach and supervise students in the Department of Atmospheric Physics.

Applicants will be expected to have research experience in the history of modern war or strategic studies and the person appointed to undertake teaching and supervising students in the Department of History.

The stipend for Senior Research Associateships is not fixed but will be in the range £7,190-£14,125 per annum. Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

DEAKIN  
UNIVERSITY  
Geelong, Australia  
Financial Accounting  
LECTURER/SENIOR  
LECTURER

Applications are invited for a Lectureship in Financial Accounting. The successful candidate will be expected to teach and supervise students in the Department of Financial Accounting.

Further details are available from the Academic Staff Office, University of Strathclyde, McCance Building, 18 Richmond Street, Glasgow G1 1XQ. Applications (two copies) together with full curriculum vitae and the names and addresses of three referees should be lodged with the Academic Staff Office by 29th July, 1983. Please quote reference 38/83.

University of Liverpool  
Department of Statistics and  
Computational Mathematics  
TEMPORARY  
LECTURER IN  
STATISTICS

Applications are invited for the above post which is available for a period of one year from 1st October 1983. The successful candidate will have a postgraduate qualification in statistics or equivalent experience in the field of statistics or demonstrating an understanding of statistical theory and practice at a level equivalent to that of a postgraduate student.

Applications (two copies) should be sent to the Registrar, University of Liverpool, 695 Chester Road, Liverpool L69 3GB, by 29th July 1983. Salary scale £7,190-£14,125 per annum.

Further particulars may be obtained from: D. A. S. Copland, Staffing Department, University of Southampton, Southampton SO9 5NH, to whom applications (seven copies from UK applicants) should be sent not later than 29th July quoting reference 181/ATHE.

University of London  
Imperial College of  
Science & Technology  
LECTURESHIP IN  
ATMOSPHERIC  
PHYSICS

Applications are invited for a lectureship in Atmospheric Physics. The successful candidate will be expected to teach and supervise students in the Department of Atmospheric Physics.

Applicants will be expected to have research experience in the history of modern war or strategic studies and the person appointed to undertake teaching and supervising students in the Department of History.

The stipend for Senior Research Associateships is not fixed but will be in the range £7,190-£14,125 per annum. Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

University of  
Canterbury  
New Zealand  
SENIOR LECTURER  
OR LECTURER IN  
MECHANICAL  
ENGINEERING

Applications are invited for a Lectureship in Mechanical Engineering. The successful candidate will be expected to teach and supervise students in the Department of Mechanical Engineering.

Further details are available from the Academic Staff Office, University of Strathclyde, McCance Building, 18 Richmond Street, Glasgow G1 1XQ. Applications (two copies) together with full curriculum vitae and the names and addresses of three referees should be lodged with the Academic Staff Office by 29th July, 1983. Please quote reference 38/83.

University of Liverpool  
Department of Statistics and  
Computational Mathematics  
TEMPORARY  
LECTURER IN  
STATISTICS

Applications are invited for the above post which is available for a period of one year from 1st October 1983. The successful candidate will have a postgraduate qualification in statistics or equivalent experience in the field of statistics or demonstrating an understanding of statistical theory and practice at a level equivalent to that of a postgraduate student.

Applications (two copies) should be sent to the Registrar, University of Liverpool, 695 Chester Road, Liverpool L69 3GB, by 29th July 1983. Salary scale £7,190-£14,125 per annum.

Further particulars may be obtained from: D. A. S. Copland, Staffing Department, University of Southampton, Southampton SO9 5NH, to whom applications (seven copies from UK applicants) should be sent not later than 29th July quoting reference 181/ATHE.

University of London  
Imperial College of  
Science & Technology  
LECTURESHIP IN  
ATMOSPHERIC  
PHYSICS

Applications are invited for a lectureship in Atmospheric Physics. The successful candidate will be expected to teach and supervise students in the Department of Atmospheric Physics.

Applicants will be expected to have research experience in the history of modern war or strategic studies and the person appointed to undertake teaching and supervising students in the Department of History.

The stipend for Senior Research Associateships is not fixed but will be in the range £7,190-£14,125 per annum. Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

## Universities continued

University of Durham  
TEMPORARY  
LECTURER IN LAW

Applications are invited for a temporary Lectureship in Law. The successful candidate will be expected to teach and supervise students in the Department of Law.

Salary on the scale for lecturers (£7,190-£14,125 pa), with initial placing according to age, qualifications and experience. USS superannuation benefit.

Applications (two copies), including a full curriculum vitae and the names and addresses of three referees quoting reference 42/83 should be lodged with the Academic Staff Office, University of Strathclyde, McCance Building, 18 Richmond Street, Glasgow G1 1XQ as soon as possible and no later than 29th July, 1983.

University of Warwick  
TEMPORARY  
LECTURER IN  
ECONOMIC HISTORY

Applications are invited for a temporary Lectureship in Economic History. The successful candidate will be expected to teach and supervise students in the Department of Economic History.

University of Kent  
Canterbury  
Computing Laboratory  
Applications are invited  
for the following posts in  
LECTURESHIP  
(Temporary)

This temporary lectureship is for a period of one year, with a view to a permanent appointment. The successful candidate will be expected to teach and supervise students in the Computing Laboratory.

Applicants will be expected to have research experience in the history of modern war or strategic studies and the person appointed to undertake teaching and supervising students in the Department of History.

The stipend for Senior Research Associateships is not fixed but will be in the range £7,190-£14,125 per annum. Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

University College  
London  
LECTURER IN  
PSYCHOLOGY

Applications are invited for a Lectureship in Psychology. The successful candidate will be expected to teach and supervise students in the Department of Psychology.

Salary on the scale for lecturers (£7,190-£14,125 pa), with initial placing according to age, qualifications and experience. USS superannuation benefit.

Applications (two copies), including a full curriculum vitae and the names and addresses of three referees quoting reference 42/83 should be lodged with the Academic Staff Office, University of Strathclyde, McCance Building, 18 Richmond Street, Glasgow G1 1XQ as soon as possible and no later than 29th July, 1983.

University of Warwick  
TEMPORARY  
LECTURER IN  
MATHEMATICAL  
EDUCATION

Applications are invited for a temporary Lectureship in Mathematical Education. The successful candidate will be expected to teach and supervise students in the Department of Mathematical Education.

University of St  
Andrews  
Department of Psychology  
TEMPORARY  
LECTURESHIP

Applications are invited for a temporary Lectureship in Psychology. The successful candidate will be expected to teach and supervise students in the Department of Psychology.

Applicants will be expected to have research experience in the history of modern war or strategic studies and the person appointed to undertake teaching and supervising students in the Department of History.

The stipend for Senior Research Associateships is not fixed but will be in the range £7,190-£14,125 per annum. Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

Further information may be obtained from the Secretary of the Faculty Board of History, University of Cambridge, 100 Brook Road, Cambridge CB2 3RQ.

University of  
Sheffield  
Division of Continuing  
Education  
LECTURESHIP IN  
EARTH SCIENCES

Applications are invited for a Lectureship in Earth Sciences. The successful candidate will be expected to teach and supervise students in the Division of Continuing Education.

Salary on the scale for lecturers (£7,190-£14,125 pa), with initial placing according to age, qualifications and experience. USS superannuation benefit.

Applications (two copies), including a full curriculum vitae and the names and addresses of three referees quoting reference 42/83 should be lodged with the Academic Staff Office, University of Strathclyde, McCance Building, 18 Richmond Street, Glasgow G1 1XQ as soon as possible and no later than 29th July, 1983.











# Don's diary

## Sunday

Set off from East Midlands Airport, excited but apprehensive on the first leg of a journey to Uganda where I am to advise one of the great African universities, Makerere, on administrative staff training. I have no African experience and vain attempts to get up-to-date information on the country or even its currency leave me not sure what to expect: certainly not the news as I got to Gatwick at 7pm that the flight to Entebbe had been delayed by 24 hours for an engine refit.

Thoughts: how to tell my host in Kampala: alert the British Council; find an hotel; recast five days' work into four; could have had an extra night at home and a day in the office.

## Monday

No passion, merely annoyance at the lack of soundproofing in an airport hotel, so that planes taking off disturb sleep. Perhaps switching on the air-conditioning will drown their noise. Decide what to wear on a cold, wet day in May. Having planned clothes for the tropics, this is a more difficult choice than usual.

A 24-hour boat trip or a day in a hotel lounge gives time to draw breath and work out ideas: how we can train colleagues in personal skills and institutional management at such a distance when there is such a continuum and at a time when lack of resources in Uganda makes the British system seem wash with funds? Can we perhaps educate some of Makerere's administrators in training and staff development practices? How shall we give them the experience on which to build their work? How to keep them up to date?

One thing is clear: the events of the 1970s in Uganda have left monumental tasks of regeneration for the government there and the well-being of Makerere is one of them. I hope that four days is enough for an initial and accurate diagnosis.

Take off at last, after a further two and half hours' delay - only 26½ hours late! The flight is interesting and good. Uganda Airlines' 707 is one of its only two long haul planes (will I get back?) and is devoted half to passengers and half to freight, whose requirements dictate intermediate stops between London and Entebbe.

## Tuesday

Arrive Entebbe 8.30am and then through five road blocks on road to Kampala. Depression. How can a magnificent country with the perfect growing climate be brought to its knees in a decade?

A once proud university so flint on the floor. The Institute of Statistics, responsible for coordinating teaching in the subject through 17 countries has no calculators that work; no journals are being purchased either in the department or by its staff; membership of the relevant professional society is prohibitive; there is no computer in the university.

A basic photocopier in one dean's office has not functioned for over 12 months for the want of one part. Phones, at least functioning ones, are almost non-existent.

The vast majority of heads of department are too young and inexperienced (having known only one university, student and teacher) to be aware that there is anything better than their current situation. Through lack of funds and awareness they are cut off from the wider academic community. But the deans and other senior staff I spoke to want to see change: deans, heads of department, professional administrators, clerks, technicians all need training in basic skills and institutional management. How to motivate seems the major issue.

Back home to contemplate through the evening. Most wants me not to worry about my gymfire I might hear but I still lock the balcony windows, lock the door and don't let the bull and poodle and grill inside the door. That's on instructions.

## Wednesday

Problems continue in the same vein: engineers without cable so that electrical workshops cannot be used, with students taught a practical subject entirely theoretically; at last a photocopier that works, but no paper; thieves stealing electric plugs and sockets and linking tools all rendering a medical research building useless; a vigorous bonfire, necessitated by lack of rubbish clearing facilities, smokes out the Institute of Public Health; all the electrical equipment in a physics laboratory *hors de combat*.

Lunchtime conversation at Kampala West Rotary is engaging but reveals not dissimilar problems in schools.

## Thursday

More hopeful, with a librarian now receiving books by the ton to make up deficiencies of the last 11 years or so. His attentional problem is lack of trained staff to assimilate them and ensure their effective deployment. I photograph an empty rack set aside for current periodicals.

An energetic continuing education centre has plans and enthusiasm, yet its television and radio studios are unfinished for the want of a few thousand pounds' work, while the equipment for them remains unused and unpacked, having been delivered in 1974. I present some initial ideas and suggestions to the vice chancellor who agrees to establish a staff development unit which can act as the umbrella for my proposal that the solution to the Ugandan problems must be rooted in Uganda and carried through by Ugandans, albeit stimulated by the UK. We have made the mistake of assuming that we know best once before.

## Friday

Final discussions with the academic registrar, my guide through the university. Things seem to be falling into place and I map out what will be a constructive and hopeful report. Another excellent lunch in my honour, this time given by the British Council, which at this occasion, continues its perceptive help to the university.

Then to brief the High Commissioner in Kampala who is supportive and encouraging. Conclude with an hour or two in the High Commission Club playing darts, drinking English beer and talking to expatriates in Uganda. The club, a weekly occasion, fulfils a very useful purpose in drawing the British community together but does not cause the memory of thoughtful, hospitable and cooperative Ugandans in a country yearning to be the "Pearl of Africa" again.

## Saturday

A morning shopping in the market protected by my African "minder", Oscar. He ensures that I pay the correct price and can proceed relatively unpestered. A tip from me, small in my eyes but princely in his, will help to keep body and soul together.

Saturday should never be a work day but the report outline must be drafted. A warm veranda overlooking Lake Victoria heats my office in a Midlands town and the thoughts flow readily. Hope there is sufficient money and will to pay for my recommendations.

## Sunday

Shepherded through the airport security net and on to the plane, this time only three hours late. An uneventful flight until accosted by security men complaining that I take a photograph inside the plane with a minor snub. I board an almost treacherous aircraft. Nevertheless arrive at Gatwick safely and leave home for 3am, after 22 hours' travel, in anticipation of a 9am appointment in the office. Look forward to sleep uninterrupted by gunfire.

M.A. Higgins

The author is senior assistant registrar at Loughborough University.

This isn't exactly "farewell THES" since I intend to continue in the noble profession of journalism and I hope the odd script may continue to find its way into this organ. But this is certainly the last column I shall write for the time being as Labour's parliamentary prospect to academia.

Last month's column was written on fairly false pretences, since I was merely, candidate at the time of writing and a distinctly hung-over, broke and unemployed former-person by the time it appeared in print. So this one is even more spurious still. It's just that the editor hasn't quite got round to finding your new Mr Labour Higher and Further Education among the 200 odd survivors of my recent holocaust.

So it gives me the chance to have my final fling. My nonultimate piece before the election was for a "Labour academic constituency". It was a proposition I did not find ridiculous - but clearly Laurie Taylor did. His fantasy of the final Labour academic being carried off to the lunatic asylum had a scary plausibility. Certainly, had done he the only voters, Labour would have lost every deposit and the Alliance would have won.

But for me, Labour's was one of the few sane voices at the election in an increasingly insane world, manipulated by PR men and multinational moguls. I joined the Labour Party in 1947 in the lower sixth at Leeds Grammar School, as an idealistic 15-year-old, believing that both both Plato and Pericles would have wished me to do so, since they both despised PR men and moguls and were addicted to Truth and Humanity. So even this June I had high hopes of my nemesis, but now I know that those cohorts of them went off and deserted.

So must I regard academics as no different or better than the spivs and the salesmen and the company chairmen and all the other villains who inhabit this country? I had always unconsciously assumed that they were different (that's why they were given various unacknowledged forms of exemption and certainly not to Money; and since these were the two subjects my Select Committee was about to discuss on before it was sadly cut off by the Prime Minister's desire for an early election, perhaps I could be allowed - as my final sermon - to discuss on the putative Reports, on the basis of what I would have said had I got my way - which I did from time to time.

The Select Committee's foray into Truth was to be our Report on Public Records. It was a subject not strictly speaking our own, but since, the Lord Chancellor was technically in charge and no select committee was in charge of the Royal Family and

## Feeding vice chancellors to the lions

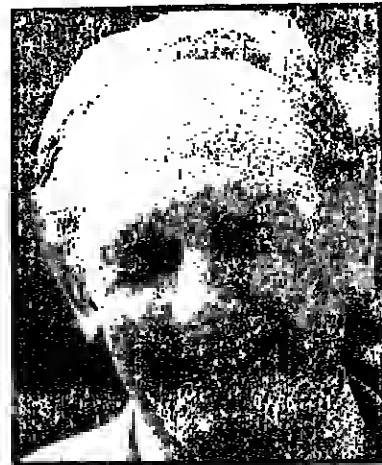
There never seems much point in being introspective either at the start of a government or at the end of an academic year. When both coincide, one becomes positively daydreamy and the decent pay rises for non-teaching staffs in universities or being a spectator in the Roman circus while six vice chancellors in leather jerkins and fish nets (to defend themselves you understand) cover before the Robbins lions.

If victimized in this suitable way, would they be called the Privatization Six in the usual political jargon and would the Association of University Teachers feel obliged to defend them? Another matter to raise at the National Joint Union Committee next time along with the immediate point on pay rises for the continued promotion of the Educational Alliance. One msnss whether National Advisory Body-builder Waldegrave fell or was he pushed and why someone like Keith Thompson is still only writing references on the sidelines for the new lot.

The campus unions look forward to the challenge of the next five years: quinquennial government and to reminding them what was in (or not in) their election manifesto. The common pay strike was an absolute flop last year, the only result being uncommonly low settlements, and one priority will be to beef up the strategy with closer union consultation and further moves towards the same pay date and a closer identification of common interests.

Another priority will be to continue our close cooperation with the National

## Dedicated to truth and humanity



Christopher Price

of him, it seemed a subject ripe for conquest. So, first a word about what we might have said about public records, had we had the opportunity to do so.

Records, whether public, quango or private, are the stuff of history. They provide evidence, as good and accurate as any historian is likely to get, of what actually happened, what people actually thought and of what pressure groups were actually trying to achieve. They are a piece of our heritage which we neglect at our peril. If we do so, we "leave our history to our enemies".

## For the record, our grandchildren have a right to know

The British system makes an effort - substantially better than that of other governments of developed countries - to keep those records reasonably tidy and accurate - but with one major flaw. We are ludicrously secret about any thing connected with national security or national embarrassment; our system is calculated to modify our history - to take one substantial, crucial element out of the equation. The history of England in future is to be the history of England minus the Official Secrets Act, the Security Services, communications cooperation with the USA, crises in the Royal Family and

administratively more efficient as it saves 44 sets of separate negotiations, it keeps Ron Hayward in a job and gives clerical and related staffs a career structure however modest.

So when the strawberries and enckel are over there will be quite a lot to keep the interest alive - new faces at the Department of Education and Science, the University Grants Committee and the Committee of Vice-Chancellors and Principals. No doubt the new private school look as astonished as the previous lot, and the ones before that, when we tell them that non-teaching staffs in universities do not even have a national pension scheme, and no doubt they will promise to look into it and so it goes on...

The favourite hobby for trade unionists in the new academic year will be privatization-spoiling through the thick foliage provided by science parks. Clearly the Privatization Six are the tip of an iceberg of Titanic-sinking proportions. Business studies scholars and people with peculiar handshakes will be watched round the clock. With a quarter of university students full from private schools the system is full of profit-making promise. We shall see.

Nalgo and the other trade unions will stick around for a while, maybe telling the taxpayer and the 93 per cent who do not enjoy a university education what is being done in the end of the cricket season, the daydreams will be put away and the battle commence. It promises to be highly enjoyable.

Rita Donaghy

The author is chair of Nalgo National Universities Committee and chair of the trade union side of the Universities Committee for Non-Teaching Staffs.

the other secret places of our society. I do not mind too much that we are not willing instantly to reveal the skeletons in the cupboard of the free democracy that our present Prime Minister talks about so readily. That is a piece of the reality of modern government and it needs a tough, uncompromising journalistic profession (which we, unlike the USA, do not have) to set the record straight and face the consequences. But our grandchildren have a right to know. They have a right to learn from our myopia and our mistakes. The refusal of the Cabinet Secretary even to trust himself giving evidence to us, the sensitivity about revealing Foreign Office telegrams even as far back as the 1920s and 1930s, all convince me of the fact that Britain hasn't changed and that we don't want our successors to know anything of our obsessions and vices.

It's especially sad since soon there'll be no official records to speak of. The telephone, the photocopying machine, the Ombudsman and the computer and auditor general have all created out of our once-great civil servants a frightened new tribe. Decisions are committed to paper, the reasons to the telephone. We shall know what was said and, above all, quite apart from the Falklands Campaign. The evidence we took on the 7: a report exists, which someone, one day, might publish. Perhaps even *The THES*...

Which brings me to Humanity. This is how I classify our Report - also never published - on the 16 to 19-year-olds. I allow that - to all too many academics - this conjures up an element of "humanity" they want to keep out of their universities. But those who think so are misguided. The future of higher education lies in its expansion, not its contraction. True teachers take pride in the number of rungs in the ladder through which they can move their charges, not the extent to which they can bask in the confidence and ability of those who have it already.

If only universities and polytechnics could see just a little further than the ends of their noses, they would be pressing for a vastly increased access to education after the age of 16; and this is a vision in which our 16 to 19 Report - I and my Labour colleagues had had our way - would have helped them. An enriched tertiary system of education in Britain would induce an expansion of higher education which the government liked it or not. I don't want to overburden the publishing activities of *The THES*. But that Report also might form an interesting series one day; and that evidence - like that on Public Records - will be published on July 7.

Did it not occur to the Reading AUC executive committee that, despite disclaimers, the new agreement would affect existing contracts? (If members of academic staff are dismissed in breach of their contracts, a judge, evaluating damages, may well take into account the then prevailing form of contract for academic staff, together with the fact of assent to it by the union, and put a value on all contracts equivalent to what the new proposals specify, that is, one year's salary. I don't believe that any vice-chancellors will be brought to water and bled by Reading's action. I fear that some lecturers will.

Yours faithfully,  
M. SMITHURST,  
Department of Philosophy,  
University of Surrey.

**Development theories**  
Sir, - *The THES* travels slowly in these parts and I have only now seen Andre's latest review of my book *Theories of Development* (*THES*, April 22). My reviewer seems to believe that it was my intention to write directly about development but he is wrong. In the opening paragraph of the book I state: "The particular 'object' of our inquiry is taken as the 'career' of 'development studies', and this history we treat in the hope of uncovering and displaying something of the nature of social theorizing" (p.3). This task is approached via the systematic identification of a series of "schools" each having a characteristic argument

strategy: the notion of ideology serves to link exegesis with recent critical theory informed discussion about social theorizing per se.

My reviewer's initial gross misapprehension permits him to castigate me for ignoring "the basic facts" (sic), to misrepresent my use of the term "ideology", and finally to launch a fatuous attack upon recent critical theory work.

It seems to me that if Andre's wishes to grind his axes he should do so in his own texts and not in the review pages of *The THES*.  
Yours sincerely,  
DR P. W. PRESTON,  
National University of Singapore.

**Contributions welcome**  
Sir, - I should like to thank Professor Healey for his encouraging review of *Bradford Occasional Papers* (*THES*, June 10).

May I, however, point out that our policy is not to publish exclusively "in-house" papers. We encourage outside contributors, as the introduction to issues 1, 2 and 3 makes clear. Yours faithfully,  
DR J. C. WHITEHOUSE,  
University of Bradford.

## LETTERS TO THE EDITOR

### Why multiple votes cannot work

Sir, - It is a strange thing about the issues of electoral reform that they cycle round and from time to time people bring up again, either as a fresh new discovery or as something deserving revived consideration, methods which have long since been considered and rejected by supporters of electoral reform and fairer voting. Usually the same old arguments are brought up in favour of the "new" or revived system.

Brian Hill's multiple vote system (*THES*, June 24) is a case in point. The reason he has not seen it mentioned is that it cannot be seriously advocated as a means for electoral reform. See for example Robert Newland's *Comparative Election System* or Enid Lake-man's *How Democracies Vote* for a full discussion, but a few moments' mathematics will show how prone it is to producing distortions even worse than those under the present system. In fact many people have direct experience of it, in local elections.

Brian Hill justifies giving consideration to such a ballot system by appeal to the myth of the "close personal link" between constituency and member. This supposed link exists wholly in the minds of present MPs and others with a vested interest in the present system, not in the minds of most of those represented - witness the high proportion of people who cannot name their MP. I do not feel in the least represented by the person elected in the constituency where I live, and such a feeling is widespread. The only system

ment Centre, where detailed study has been made of the changing educational needs of managers, a special programme was developed in conjunction with the education and training department of BSC. Although student numbers involved were much smaller than those faced in Consett itself, the success of the programme is indicated by analysis of student performance. Three months after completion of the course, for example, 50 per cent had found work despite the deteriorating employment situation in the region.

It is a pity that the tone of your article chose to echo the common media practice of finding bad news more worthy of emphasis than good.  
Yours faithfully,  
J. W. GRITTON,  
Director,  
Northern Regional Management Centre,  
Washington,  
Tyne and Wear.

**Reading precedent**  
Sir, - What is to be deplored in the agreement reached by the Reading Association of University Teachers is that it has set a precedent for other universities by negotiating for future entrants to the profession terms of service worse than those presently enjoyed, and that it has yielded to the "managerial" concept of a university by conceding to colleagues a power, however qualified, of firing for reasons irrelevant to personal conduct or merit. Further, it undermines the AUC's arguments of principle on tenure by abolishing tenure for future staff while appearing to preserve it for those in post.

Did it not occur to the Reading AUC executive committee that, despite disclaimers, the new agreement would affect existing contracts? (If members of academic staff are dismissed in breach of their contracts, a judge, evaluating damages, may well take into account the then prevailing form of contract for academic staff, together with the fact of assent to it by the union, and put a value on all contracts equivalent to what the new proposals specify, that is, one year's salary. I don't believe that any vice-chancellors will be brought to water and bled by Reading's action. I fear that some lecturers will.

Yours faithfully,  
M. SMITHURST,  
Department of Philosophy,  
University of Surrey.

**Development theories**  
Sir, - *The THES* travels slowly in these parts and I have only now seen Andre's latest review of my book *Theories of Development* (*THES*, April 22). My reviewer seems to believe that it was my intention to write directly about development but he is wrong. In the opening paragraph of the book I state: "The particular 'object' of our inquiry is taken as the 'career' of 'development studies', and this history we treat in the hope of uncovering and displaying something of the nature of social theorizing" (p.3). This task is approached via the systematic identification of a series of "schools" each having a characteristic argument

strategy: the notion of ideology serves to link exegesis with recent critical theory informed discussion about social theorizing per se.  
My reviewer's initial gross misapprehension permits him to castigate me for ignoring "the basic facts" (sic), to misrepresent my use of the term "ideology", and finally to launch a fatuous attack upon recent critical theory work.

It seems to me that if Andre's wishes to grind his axes he should do so in his own texts and not in the review pages of *The THES*.  
Yours sincerely,  
DR P. W. PRESTON,  
National University of Singapore.

**Don's difficulty**  
Sir, - One of your recent Don's Diarists find it "increasingly difficult to write encouraging remarks about poor students who don't even bother to inform" him that they have listed him as a referee.

Has he stopped to think how much of his precious time he would waste in every time that he wrote to him every student who applied for a job - especially given the sheer number of applications that most people seeking employment have to make under current conditions?  
Yours faithfully,  
STEVE MAY,  
Flat 10 Trinity Place,  
Holtville, Bristol.

**Letters for publication**  
should arrive by Tuesday morning. They should be as short as possible and written on one side of the paper. The editor reserves the right to cut or amend them if necessary.

**Youth faithfully**  
If E. ORCHARD (Mts).  
Secretary for Language,  
Royal Society of Arts,  
Examination Board.

**Don's difficulty**  
Sir, - One of your recent Don's Diarists find it "increasingly difficult to write encouraging remarks about poor students who don't even bother to inform" him that they have listed him as a referee.

Has he stopped to think how much of his precious time he would waste in every time that he wrote to him every student who applied for a job - especially given the sheer number of applications that most people seeking employment have to make under current conditions?  
Yours faithfully,  
STEVE MAY,  
Flat 10 Trinity Place,  
Holtville, Bristol.

**Letters for publication**  
should arrive by Tuesday morning. They should be as short as possible and written on one side of the paper. The editor reserves the right to cut or amend them if necessary.

which in practice gives reasonable assurance of some local link with an MP with which one might feel some sympathy (and who might feel some sympathy for you) is the single transferable vote in multi-member constituencies.

I am reminded of the argument that in the government of universities the interest of a member of staff is best represented by the head of his department. This argument tends to be held only by head of department and their closest associates.

Yours faithfully,  
BRIAN MEEK,  
Director, Computer Unit,  
Queen Elizabeth College,  
University of London.

**Chairman's sums**  
Sir, - Thank you for the profile of the new chairman of the UGC ("Dyer's consequences" (*THES*, June 24)).

My experience of British universities seems to be inversely related to his unattractability. I also have some doubts about his knowledge of American universities. What examples can be respected teaching institutions but which have no research component? There aren't any, except in that abstract realm where the wish is father to the thought.

We can spend part of the summer wondering whether we are in "good departments" in "less good universities".  
Yours sincerely,  
ALAN HALL,  
University of Keele.

**Japan's teachers**  
Sir, - Michael Hovner, in his article (*THES*, July 11) on foreign teachers in Japanese national universities, states that "foreign teachers may now serve on an equal legal footing with Japanese university staff." It is true that Japanese national universities may now recruit foreign teachers as permanent members of staff, if they wish to do so. It is not true that foreigners now work as "invited foreign teachers" (*gaikokujin kyoshi*) are being offered a choice between this status and permanent faculty member status.

Hovner's article implies that most invited foreign teachers have rejected the offer of faculty member status, but in fact very few have received it.  
Yours faithfully,  
J. F. MORAN,  
Tsukuba University, Japan.

**Wimbledon fees**  
Sir, - Your article on Wimbledon postgraduate diploma course in printmaking (*THES*, June 17) contained many factual errors, not least the fact that this year's graduates have paid to Merion Borough Council £1,500 for the course, not £228 a year as your article suggested.

Whether the course was designed for "students clearly unable to win grants" or not, I certainly have won grants in the past and hope to win some in the future. It would be more correct to say that the nature of the course is such that it cannot attract bursaries.  
Yours faithfully,  
RACHEL WOODNUTT,  
Bury House,  
1768 Bury Street,  
Ruislip, Middlesex.

**Don's difficulty**  
Sir, - One of your recent Don's Diarists find it "increasingly difficult to write encouraging remarks about poor students who don't even bother to inform" him that they have listed him as a referee.

Has he stopped to think how much of his precious time he would waste in every time that he wrote to him every student who applied for a job - especially given the sheer number of applications that most people seeking employment have to make under current conditions?  
Yours faithfully,  
STEVE MAY,  
Flat 10 Trinity Place,  
Holtville, Bristol.

**Letters for publication**  
should arrive by Tuesday morning. They should be as short as possible and written on one side of the paper. The editor reserves the right to cut or amend them if necessary.

**Youth faithfully**  
If E. ORCHARD (Mts).  
Secretary for Language,  
Royal Society of Arts,  
Examination Board.

**Don's difficulty**  
Sir, - One of your recent Don's Diarists find it "increasingly difficult to write encouraging remarks about poor students who don't even bother to inform" him that they have listed him as a referee.

Has he stopped to think how much of his precious time he would waste in every time that he wrote to him every student who applied for a job - especially given the sheer number of applications that most people seeking employment have to make under current conditions?  
Yours faithfully,  
STEVE MAY,  
Flat 10 Trinity Place,  
Holtville, Bristol.

**Letters for publication**  
should arrive by Tuesday morning. They should be as short as possible and written on one side of the paper. The editor reserves the right to cut or amend them if necessary.

**Youth faithfully**  
If E. ORCHARD (Mts).  
Secretary for Language,  
Royal Society of Arts,  
Examination Board.

**Don's difficulty**  
Sir, - One of your recent Don's Diarists find it "increasingly difficult to write encouraging remarks about poor students who don't even bother to inform" him that they have listed him as a referee.

Has he stopped to think how much of his precious time he would waste in every time that he wrote to him every student who applied for a job - especially given the sheer number of applications that most people seeking employment have to make under current conditions?  
Yours faithfully,  
STEVE MAY,  
Flat 10 Trinity Place,  
Holtville, Bristol.

**Letters for publication**  
should arrive by Tuesday morning. They should be as short as possible and written on one side of the paper. The editor reserves the right to cut or amend them if necessary.

## Two years would rob students

Sir, - Gareth Williams' letter (*THES*, July 11) in favour of a two-year pass degree is wonderfully naive. The case he makes is not all that convincing. Will less time necessarily help graduates to connect their specialism with others, or prepare them better to adapt to new knowledge tomorrow? If knowledge is increasingly rapidly, does it make sense to spend less time learning?

Even if he is right, the danger is that his views will be used to rob a generation of students. I fear the Williams model will be pushed forward energetically, and unless three years of grant and a third year of course are guaranteed to all who get a place on a pass degree course, the Government will be able to claim it has not breached the Robbins principle, and is heading the best research advice, while providing less education. And, surprise, surprise, expected fall in student numbers, any further savings could be achieved without too much pain. A genteel decline into equality of misery.

Or did they decide to robustly back Sir Keith Joseph: "total dependence on the taxpayer is not a proper or desirable base on which an independent institution can reliably reckon." Are they laying plans over the summer for substantial privatisation, or possible mergers, before a Select Committee or anyone else can call them to account?

Officials from the DES were included in the choice hand called together by Sir Keith to discuss "experiments" in alternative financing. Some vice chancellors will relish the apparent autonomy, perhaps even unrestricted authority, that Sir Keith dangles like a carrot in front of them.

Yours faithfully,  
DAVID C. WEBB,  
65 Westhouse Road,  
Lancaster.

**Brunei advice**  
Sir, - I must correct the inaccuracies contained in the front page news item "Brunel curtails its advice" (*THES*, July 11). This claimed that Brunel was about to "exclude from its welfare booklet given to new students information about the Citizens Advice Bureau; the Community Relations Council; the Contraceptive Advice Clinic; mental treatment" etc.

This claim is wrong. The University Welfare and Amenities Sub-Committee (not the University Council as implied in your report) decided to include at the end of the booklet all the outside organization mentioned in your report with their addresses and telephone numbers. This was in line with the committee's plan to give greatest prominence to agencies available in the university itself. There was no question of exclusion or references to outside bodies.

There is a clear political will to see change in higher education. Less clear is the kind and quality of higher education Sir Keith and the DES have in mind. It sounds like ability to pay may be the main selector of both courses and students.

None of these proposals have been discussed publicly. The UGC was apparently involved in Sir Keith's private discussions, but the Committee of Vice-Chancellors and Principals was not. Nor were university teachers, researchers and administrators.

This secretiveness has bedevilled possible discussions about desirable change. We have a new minister. He has a new chairman of the University Grants Committee, who has already said he wants the committee to be more open. There is a new chairman of the Committee of Vice-Chancellors and Principals, who wants his committee to play a stronger role and who looks for a rational dialogue with government.

University teachers will be licking their wounds over the summer. They are fed up with guerrilla warfare and sticking plaster solutions.

Isn't it about time the DES, UGC, CVCP, and AUT got their act together? The future of countless youngsters and the future social and economic development of the country may depend on it. The AUT has proposed just these discussions. Over to you, Mr Brooke.

**Ethnic training**  
Sir, - Professor Craft and Dr Atkins are right to be concerned about the lack of training for teachers of ethnic minority languages. (*THES*, June 24). However, their report is not quite accurate. There is somewhere where graduates, and others, can obtain training. The Royal Society of Arts Examinations Board has introduced a diploma in the teaching of community languages which is intended for those working in mainstream or supplementary schools and colleges.

Teachers of languages or for unqualified teachers in other disciplines who wish to become language teachers. The scheme will be run at six centres this year on a pilot basis and after that it will be available generally.

**Youth faithfully**  
If E. ORCHARD (Mts).  
Secretary for Language,  
Royal Society of Arts,  
Examination Board.

**Don's difficulty**  
Sir, - One of your recent Don's Diarists find it "increasingly difficult to write encouraging remarks about poor students who don't even bother to inform" him that they have listed him as a referee.

Has he stopped to think how much of his precious time he would waste in every time that he wrote